

1-2

A N
E S S A Y
O N
BILIOUS FEVERS;
OR, THE
H I S T O R Y
O F A
BILIOUS EPIDEMIC FEVER
A T L A U S A N N E,

In the Year MDCCLV.

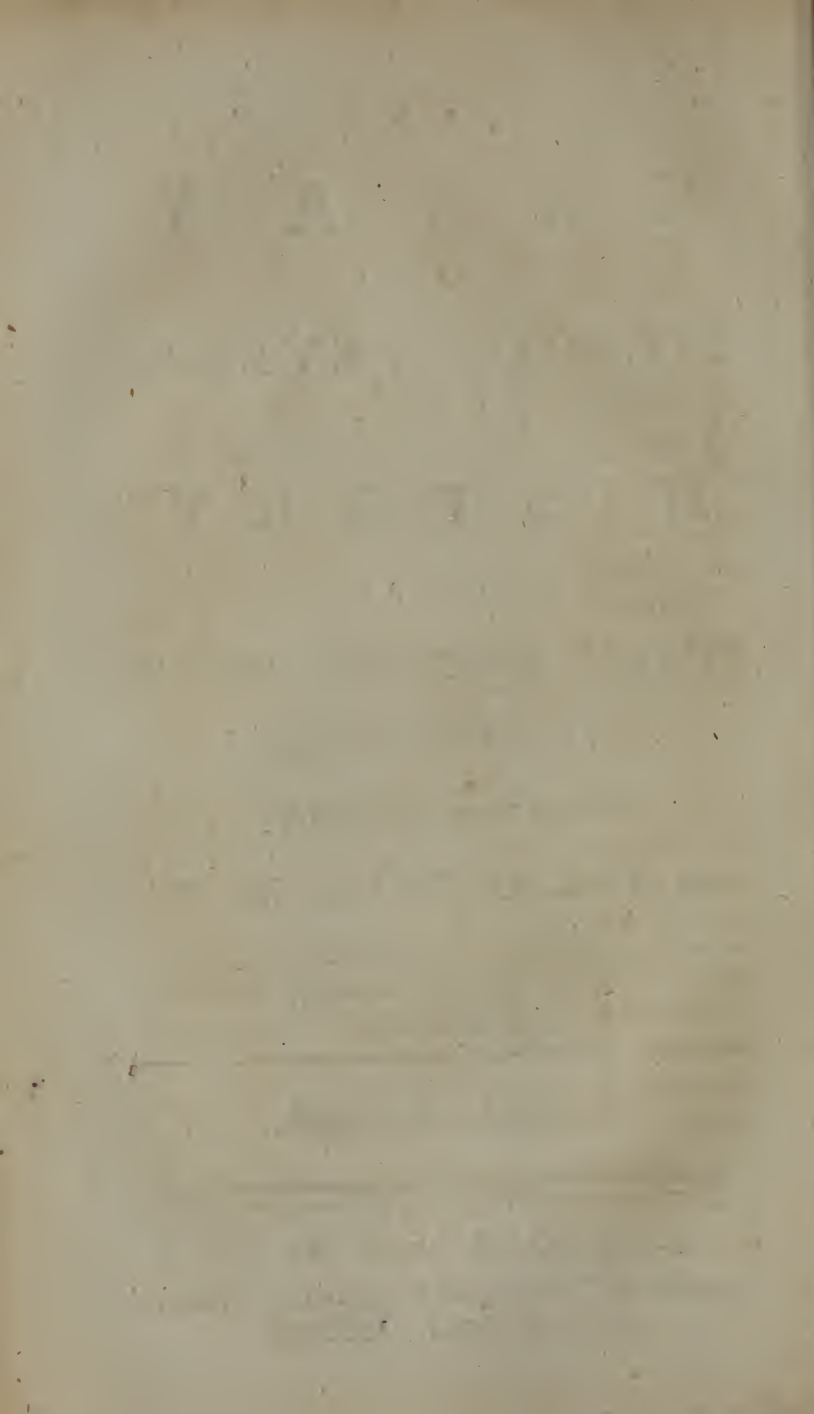
By S. A. D. TISSOT, M. D.

*Appello Veritatem ipsamque naturam, Medicorum
Numina in perpetuum Colenda.* BENNET.

Translated into English:

L O N D O N:

Printed for D. WILSON and T. DURHAM, at Plato's-
Head in the Strand. MDCCLX.



T H E

P R E F A C E.

I HERE offer to the candid reader a faithful history of a severe and tedious disease of the putrid kind, which was epidemical at Lausanne in Switzerland, particularly in the year 1755. To speak of the utility of the design would be an affront to his judgment; but it is necessary to premise somewhat concerning the method which I have followed.

HE, who compiles bare histories, and relates them simply, is worthy of praise; but it is the business of a labourer to collect materials to be put in order by an artist; for from a collection of observations upon epidemics, a rational physician draws practical canons applicable to different kinds of distempers. A simple narrative teaches a young man nothing, unless the same symptoms occur again; and when does that happen? I have therefore endeavoured to throw this treatise into such a

A 2

form

form that a method may be pointed out of curing not only a distemper most nearly resembling ours, but all putrid gastric diseases, every where supported by experience, theory, and authority; this is the reason of the title I have given to this small work.

No medical work can be supported without theory and experience. Those who are by no means fond of reading will perhaps condemn the multitude of quotations to justify their own indolence, but I shall never agree with them. He is an unhappy man who is taught only by his own experience. Should we refuse to learn from our predecessors? By no means, for what will be the consequence of that refusal! As I owe my knowledge to the wisdom of others, I did not think it unbecoming to quote my teachers. Thus the doctrine acquires the greater authority; and often the work is rendered more elegant; for I have in this manner adopted the words of great men, that laying aside my own, they might deliver my sentiments in a neater dress. Nothing procures greater certainty to physick, nor better removes all
 doubts

doubts about what is to be done, than that wonderful harmony among the most celebrated physicians of all nations and ages; I therefore believed it useful to add to the faithful relation of what I observed and of my practice, the motives by which I was induced to take such measures.

THE quotations from the antients will be displeasing to those, who have never conversed with their works, they will account them as a blind idolatry, rather than a judicious veneration. I confess I do not reverence the authorities of the antients so much as some others do, and I readily assent to what is said by the illustrious Maty †, whom I reckon with pleasure and pride among the number of my friends; but I would except Celsus, Aretæus, some books of Galen, Alexander of Tralles, and especially Hippocrates, whom I admire

† “ It is to be feared that the advantage, which
“ may be reaped from several of these works is but
“ little proportioned to the time, which is spent in
“ reading them; besides a young man runs a risk of
“ making no good choice and perhaps of confounding,
“ rather than informing his judgment.” *Essai sur le
caractere du grand Médecin, ou Eloge critique de Mr.
Boerhaave*, p. 25. An essay well worth reading.

above all other physicians, and have more frequently quoted than all the rest; *for if we depart from Hippocrates alone, who is left equal to him?*

I EVERY where suppose the reader a physician, and previously acquainted with what ought to be known; nor have I been of the number of those, who, relating the Trojan war, begin with the egg of Leda; for I know nothing more tedious than to find in all books the obvious elements; nothing is more prejudicial, for a great deal of precious time is lost in reading over and over the commonest things. I have seldom and only from necessity introduced theory; I collected several particular observations which appeared important, and could not be ranged more properly any where else.

PERHAPS some might have chose a different method, but after mature deliberation I could not find a more convenient one. I thought fit to treat of some remedies, which I did not make use of, because some men, otherwise of great character, prescribe them in diseases of the same kind with ours. It is indeed to be lamented
that

that from the confusion of names in physick, different diseases are described by the same appellation. 2. That practical treatises have been often wrote by men, who were well skilled in medical learning, but who were not in the least conversant with practice. 3. That several others being wedded to an hypothesis, founding all their practice solely upon hypothesis, and blinded by it, without the least dissingenuity, have in their writings assigned diseases to causes, and certain virtues to medicines very different from the true. Hence I sometimes found myself under a necessity of pointing out the errors of those venerable men. It was my great rule all through this work to relate what I observed and to admit for true only what was taught by unerring nature, or the consent of the greatest men. What an otherwise valuable author recommends, if it seemed repugnant to nature, or the observations of several men of character, or contrary to demonstrated maxims, I treated as false, or at best very doubtful. The art of physick in its rise consisting of a very few observations, was destitute of every other guide, and particular observations are often imperfect,
often

often fallacious; in process of time by comparing them with large collections afterwards made, men of genius and learning deduced canons, which are the true elements of physick, and the touch-stone to which the later ones ought to be applied, that the imperfect may be distinguished from the more perfect. Innumerable are the fatal consequences of the neglect of this caution, for the imperfect are in great abundance, and have authority with men, who are entirely ignorant of the principles of the art, and who, misled by false reasoning and deceived by the external resemblance between distempers totally different, have already, and continue daily to bring many to their graves.

I HAVE inserted no forms of prescription; I made use of few, and those very simple; and every physician, who is acquainted with the cause of the distemper and the virtues of the remedies, will very readily prescribe the best in each particular case; nor are we destitute of such already composed by men remarkable in the art, Boerhaave, Gorter, and Gaubius.

THE language will be found void of rhetorical flowers, and affected ornaments, which would have served no purpose. I studied ease, avoided pompous words, and have endeavoured to shun improprieties; perhaps several have crept in, for which I crave indulgence. I submit the whole treatise not to the multitude of those, who pretend to be judges, but to the small number, who deserve that name; if they approve it I shall perhaps be encouraged to attempt something more considerable on nature considered in a medical view, and the small-pox.

Laufanne,
January 2, 1758.



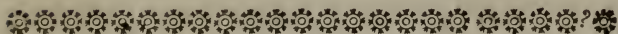
CONTENTS.

<i>THE constitution of the air.</i>	Page 1
<i>History of the Disease.</i>	4
<i>Of the class to which it belongs, and its cause.</i>	18
<i>The examination of a dead body.</i>	27
<i>The Method of cure. First Species.</i>	32
————— <i>Second Species.</i>	55
————— <i>Third Species.</i>	74
<i>The Diet of the Patient.</i>	95
<i>Relapses.</i>	105
<i>Consequences of the Disease, a metastasis.</i>	108
<i>Relicks. Obstructions.</i>	112
————— <i>Debility.</i>	132
<i>Of</i>	

<i>Of bleeding in bilious fevers.</i>	p. 158
<i>An examination of the virtues of absorbents.</i>	205
<i>Of Sudorificks, Diureticks.</i>	208
——— <i>Cardiacs.</i>	214
——— <i>Narcotics.</i>	217
<i>The Prophylactick method.</i>	221
<i>Practical Canons.</i>	223



T H E
H I S T O R Y
O F T H E
EPIDEMIC BILIOUS FEVER
AT LAUSANNE, 1755.



The Constitution of the Air.

TO the violent heats in summer 1754 succeeded a hot autumn; in the beginning of winter, we had either perpetual showers or fogs, and the season warm. The weather remained thus till the third day of the following Year, when there suddenly came on that violent cold, which by the 5th and 6th of January grew so intense over all Europe almost, that it fell but
B little

little short of that remarkable and since unparalleled frost of the year 1709. It continued very severe to the 14th of the month, then it abated somewhat, tho' the same frost still lasted till the 20th of February. March was showery; April so hot, which is very uncommon in our country, that happening at that time to attend patients in the small-pox, I was obliged to renew the air in the chambers from all quarters, and moisten the boards frequently with cold water. In the beginning of May, the severe cold returned with a northerly wind, and was very pernicious to the tender leaves and blossoms. The weather was unsettled during the whole month. Violent heat commenced with the month of June, and continued to the 23d of July.

THE greens collected in cellars perishing by the winter's cold, the use of animal food was more plentiful than in other years. The city is built in such a manner, as to stand much exposed to the influence of the weather.

WHOEVER

WHOEVER is acquainted with the laws of the animal oeconomy, and the effects of the air, as well as of different foods upon the human body, will very readily apprehend three consequences from the circumstances mentioned: 1st, a disposition of the humours to putrefaction; 2dly, a disordered and obstructed perspiration; 3dly, the resumption of pungent and putrid matter to the *primæ viæ*, and consequently an interruption of the intestinal discharges, for there the putrid ferment was collected, which being put in motion by the summer heats produced that epidemic fever, which prevailed so universally here, that hardly a fourth part of any family escaped it; and in several houses, two, three, nay six were sick at one time^a.

B 2

THE

^a This would not be a proper place to treat largely on the production of diseases from the air. Excellent observations on this article are to be found, among many others, in Hippocrat. de aere, aquis & locis; de humorib.; Aph. lib. 3. in Epidem passim. Edinb. Med. Essays; Mem. Academ. Par. from 1746, by the celebrated Du Hamel and Malouin; the ingenious Burton on Non-naturals; the illustrious F. Hoffman in Observat. Barom. meteorol. in patholog. p. 3. c. 7. and many other places through his works: *Nothing, says he, corrupts the bile, renders*

THE disease was not equally violent in all; but the symptoms of a putrid cachymy oppressing and irritating the digestive powers, to be found in every patient, demonstrated the distemper to be of the same kind. With regard to its vehemence, it may be accurately enough divided into three species. The first was attended with no danger, unless by being neglected it degenerated into a chronic distemper: The second, tho' not void of danger, yet as far as I know never proved mortal, except when either by wrong management, or no care at all, it was changed into the third. The third by the blessing of God was very rare, but always very threatening, and sometimes fatal.

The History of the Disease.

IN the first species, patients complained first of a lassitude, weakness, weight particularly of the head, loathing of food, an uneasy and almost constant sensation of

renders it impure, and fills it with caustic salts more than an obstruction of the natural discharge by the surface of the body. Whenever such caustic bile is found in the primæ viæ it creates shivering, anxieties, vomiting and febrile paroxysms. De Bile medicin. et ven. corp. hum. § 31. T. 6. p. 159. Above all in the celebrated Huxham's book de Aere et morb. Epidem.

cold,

cold, infomuch that during the dog-days they would go with great pleasure to a kitchen fire; they were drowsy without sleeping; their mouth slimy; and their tongue foul with a whitish-yellow tenacious covering. After three or four days, sometimes later, a shivering came on towards evening, which harassed them for an hour or two, sometimes longer: This was followed by a heat not vehement indeed, but troublesome and pungent, which communicated a smart heat to the fingers of the physician; in some this continued till morning, and then gradually went off without any sensible evacuation; in others after some hours a gentle sweat came on, for I never saw it profuse, but it did not bring that placid interval, which succeeds the sweats of true intermittents. I heard frequent complaints of the head in the time of the paroxysm, but none of the breath. In the first days the pulse hardly differed from a natural one, except by it's weakness; in the time of the shivering it was very small, during the heat quick, contracted, and frequent, yet not exceeding an hundred pulsations in a minute in an adult wo-

man^b. When the paroxysm was ended, the patients remained in the same state of languor, which I described before, rising indeed out of bed, but unfit for all kinds of employment, torpid, lazy, dragging themselves from their chair to the bed, and from the bed to the chair, and not walking without reluctance. The paroxysm returned every day, but frequently varied from it's first hour; neither was it always similar to itself in other circumstances. Nay, there were some patients, who without regard to any period, shivered and grew hot often in one day; I knew several in whom I could hardly suspect any exacerbation, unless from a little more anxiety and debility in the evening, but they were never free from the oppression of the languor, nor were they sooner cured than others. There were some, particularly of the older women, who scarcely complained of any thing else beside debility, loathing of food, and want

^b Excellent observations concerning the number of pulsations during a given time, in a sound man, and one labouring under a fever, have been published by the illustrious Haller in his valuable essay on the motion of the blood. *Mem. sur le mouv. du Sang. chap. 8. p. 36.*

of sleep. Some were distressed with a pain of their stomach ; and what was common to them all, they did not recover till after some weeks. There were several patients whom, no such violent symptoms appearing as required the speedy aid of a physician, I did not see till fifteen days after they had been seized, and I found little or no difference in their symptoms from the others, save that the heat and debility had increased, and by that time brought them in danger of a slow fever. In the beginning of the distemper, the belly was bound, towards the end a little more lax ; the urine during the interval was thin and crude, in the violence of the paroxysm a little more red ; upon the decline of the disease it became concocted with a sediment. I found very few who had much thirst. Boys, women, and old people were principally subject to this species, men very rarely. Old men escaped the second. The third attacked only young men in the flower of life, from 15 to 40, and generally carried off the more robust ^c.

B 4

THE

^c An observation of this nature was not missed by Hippocrates, for he noted an epidemical disease in which
those

THE beginning of the second species was not very different from that of the first; but after some days every thing was more aggravated, the weakness increased, a nausea followed the loathing of food, but the sick very rarely vomited spontaneously; the heat was more brisk, and the paroxysms more violent; at the beginning they did shiver, tho' gently, but afterwards scarce any coldness was perceived before the paroxysms; but the heat grew gradually more intense, generally in the evening; the pulse was more frequent, and upon trial, in some persons I was able to count one hundred and sixteen strokes in a minute. At this time several were distressed with most acute head-achs. After three, four, or five hours the fever remitted, and, as in the first species, without a sweat. Nor were sweats very desirable, for upon the decline of the distemper they did good, but during it's height, both in this, and in the third species they were prejudicial; for the more profuse they were, the more severe was

those patients chiefly died, who were in the vigour of life. *Epidem. lib. 1. Stat. tert. Foef. p. 955.*

the

the succeeding paroxysm. The patient had not a perfect interval, and this was the pathognomic symptom, whereby we might distinguish the second species from the first. The urine was small in quantity, thin, and reddish; the natural stools few and small, the tongue dry, and covered with a yellow mucus; they had scarce any sleep, but what was turbulent, with anxiety, and not at all refreshing; the thirst was more troublesome than in the first species, and yet not so great as might have been expected from the heat; the patient was quickly emaciated with a pale yellow face. The paroxysms were not so irregular as in the first species. By bad management the transition was easy from the second to the third species: A remarkable change of this kind it gave me pain to observe in a weaver and his wife. Their daughter, a girl of ten years old, had laboured under the same distemper; her symptoms were a burning heat, a very frequent and quick pulse, with an excruciating pain of the head in the time of the paroxysm, and drowsiness without sleep during the remission; by a potion which worked upwards and downwards, by the

use of diluent and acescent drinks, and a second purging, she was beginning to recover, when her father took to his bed ; upon coming to him I did not find him extremely ill, I ordered a medicine to vomit and purge, and an antiseptic ptisan, four ounces of which he was to drink every hour night and day. At that time I left the city to visit my dear mother, who was attacked with a nervous fever ; returning after three days, I found him raving, short-breathed, convulsed, with an inflated abdomen, and a very frequent pulse ; there were no evacuations by stool, nor of urine. Accidentally I perceived a potion standing upon a table by the bedside, and looking at it, I found it to be the emetic medicine I had prescribed four days before. Upon my asking the reason of this neglect, I was told that those about him had judged him too weak to bear an evacuation ; laying aside at the same time the acidulated drink, and with an intention to support his strength as they thought, they had crammed the man, against his will, with strong beef soups, sweet bread made of flour, eggs, and sugar, strong red wine ; and with a
view

view of promoting a sweat had given Venice treacle, with a decoction of Scordium; hence that number of cruel symptoms, which made the case almost desperate. But that I might not seem to leave the patient to die, I ordered emollient and gently cathartic clysters to be injected every six hours. I prescribed also acefcent drink of the same tendency, and blisters to be applied to the soles of his feet. The following night he grew more composed, had three stools and made water plentifully, when we entertained some hope; I directed the continuance of the same medicines, being again obliged to go out of town. What was the consequence? his relations, endeavouring to support his strength (his delirium rather) declining together with the fever, threw aside the medicines a second time, as I learned from the apothecary, and having recourse to I don't know what poisons, compounded under the specious title of Cardiacks, by a cruel death put a period on the seventh day of the distemper to the life of this unhappy man, who was born to more days if he had been destitute of all help: His wife snatched away by a like fate, scarcely survived him

three

three days. And such was one origin of the third species, which, otherwise however, appeared to be a distinct distemper by itself; for in several, although they made use of the best remedies from the first attack of the disease, and their disorder seemed to be restrained by them, yet on the sixth, seventh, or eighth day, all the more alarming symptoms came on. When I had left a person in the evening with the hopes of a milder paroxysm, I often found him next morning dangerously ill after a severe night, with a frequent and very quick pulse, a beginning delirium, and a flatulent swelling of the abdomen, which two symptoms distinguished the third species from the second; then the paroxysms scarce any longer preserved the least order in their attacks, but came on irregularly at all times; the pulse became so frequent, that the strokes could hardly be counted; there was a general subsultus of the tendons; the anxiety and restlessness were without intermission, the eyes fierce, twinkling and gummy: the delirium increasing, made some brisk, and approached almost to a phrenzy, in others it was more calm, and resembled

a lethargy, in both cases it was dangerous. The first talked incessantly, the others were silent and morose, and made not the least complaint of the distemper, tho' by holding their hand frequently to their forehead, it was plain they had a violent head-ach. When the physician asked how they did, they looked stedfastly at him and answered in a brisk tone of voice, *Very well.*
^d They did not know their friends, the flatulent swelling increased daily, especially about the hypochondria. ^e The breath grew short,

^d How dangerous this kind of delirium is, besides the original distemper, the physicians of all ages have remarked; for it shews the brain to be totally obstructed, and all sensation depraved: The words of an eminent physician which I shall quote here, deserve notice. *If the patient be reduced to such a state as to say I am very well, (nearly the same as I have described) we tremble at this word alone, he is delirious.* Medicin. Experiment. Part 1. Chap. v. p. 123.

^e This swelling arises from flatulencies generated by putrefaction, and not from an inflammation as some would falsely imagine. This did not escape Galen: *Sometimes the Illia are distended without an inflammation properly so called.* Comment. in prænot. text 30 Oper. ex Froeben edit. t. iv. p. 751. Which species of inflation I would have accurately considered, that we may not have immediate recourse to bleeding with the hopes of removing an inflammation, when there is none. How much

short, so that they almost constantly panted; a cough was an uncommon symptom; their stools were irregular, liquid, fat, colliquative, and sometimes bilious, which was good; often white and frothy, which was always a very bad sign^f, for it implied the retention of the morbid matter, and a spasmodic disorder in the motions of the intestines. Some few however were seized with a purging at the beginning; nor did things go better with them: Nay, I saw a young woman in this distemper, which proved fatal, who, as I was told, had been afflicted with a serous discharge by stool for two months before the disease; and what

much danger attends a tension of the Ilia from any cause. We learn from Hippocrates *ibid.* § 33 & 63. *Prorretic. lib. i.* § 127. Inflated bellies in dangerous distempers he numbers among the symptoms of death, *Lib. viii. Aph. 17.*

^f *In dangerous and bilious distempers, very white and frothy excrements are bad.* Hippocr. *Prorret. lib. i.* § 53. Foes p. 71, *ibid.* § 21. Compare with this Gorter. *medicin. Hippocr. comment. in aphor. 355;* and in Celsus there is a passage very much to the purpose. *A lientery is dangerous if the stools be frequent; if the belly discharge at all times, both with noise and without it; if it be alike in the day and the night; if the discharge be crude.* *De Medicin. lib. 11. cap. viii. p. 74.* Read also Prosper. Martian. 345. E.

ad-

advantage could be obtained by these evacuations which do not carry off the morbid ferment? In general a purging, which came on at the beginning, was hurtful, for it was always symptomatic; and altho' it was very fetid, yet it left the cause of the disease untouched; so that with the increase of these evacuations, the disease grew worse, to the astonishment of the by-standers^g. The urine was always crude; in other respects different every day, white, thin, fat^h, turbid, resembling that of cattle, red and colliquative; if there was any cloud it always occupied the upper part, which Hippocrates condemnsⁱ. From paralytic sphincters and the delirium, the evacuations were involuntary and unperceived by

^g Excellent observations concerning the Mischief of fetid discharges, which do not move the morbid matter, are to be found in Hippocr. de humorib. § 14. 31. Foef. 47, 48. Aph. lib. § 2. 25. lib. iv. § 2. 3. It has been observed also by the famous Walcarengi that a diarrhoea in the beginning of a bilious fever with petechiæ was fatal, towards the end salutary. Medicin. ration. Tom. 1. § 267.

^h *We ought to condemn fat substances swimming near the surface like spiders-webs, for they denote colliquation.* Prænot. § 79. Foef. p. 40.

ⁱ Ibid. § 80, and elsewhere in many places.

them.

them. In five I met with purple spots, to all whom they were mortal ^k; there were either no hemorrhages at all, or they were fatal, no thirst, tho' the tongue was dry, black, and tremulous; the voice was shrill, and there was a universal tremour ^l, a gathering of the clothes, and catching at flies ^m. After the greatest restlessness came on the highest debility, which was followed by

^k *When any purple or livid pustules appear on the skin, the hypochondria being tense and inflated, the patient generally dies.* Boerhav. Aphor. 735.

^l The ancients were not ignorant how much danger was to be apprehended from a tremor joined to a delirium. Hippocrates observed the same symptoms, which appeared in our epidemic distemper. *Raving with a shrill voice and a tremulous convulsion of the tongue, a trembling voice also, are proofs of a very strong delirium.* Prorretic. lib. 1. § 19. Foef. 68. *Tremors coming on after a violent delirium are fatal.* Coac. Prænot. § 88, 93, 97. *Trembling tongues with a black colour portend death,* ibid. 223. A tremor in diseases always shews the debility of the vital powers; the reason therefore is plain why it should be reckoned so bad a sign.

^m *About the motion of the hands my opinion is this. In acute fevers, or pains of the head, when the patients imagine something to be before them, and are hunting after it, and gather mites, or pull wool off the clothes, and catch at straws on the wall; all these are bad, and portend death.* Prænot. § 17. All which symptoms this great man had observed in a bilious fever. Vid. de dieb. judicat. § 3. Foef. p. 57.

death.

death. Sometimes, when the distemper was disguised in the beginning by the mildest symptoms, I was led to suspect some lurking mischief from the small and quick pulse, a very gentle, but universal tremor, a sudden change of the countenance, and a certain kind of anxiety and moroseness, quite opposite to the mildness of the symptoms. I remember a man addicted to drinking, upon whom the distemper gained ground so fast, that he appeared even on the third day to be beyond hope, with a very bad pulse, a shortness of breath to the highest degree, and a delirium; he was relieved in a short time by a vomit. In this, as well as the other species, the paroxysms with regard to their vehemence, followed the form of a tertian, so that I have always observed the symptoms more aggravated every other day, and they died on the worst day, from the seventeenth to the twenty-fifth day. I know of only two persons who died after the thirty-fifth.

THESE are the principal and pathognomick symptoms of our epidemic distemper: Some varieties and more remarkable cases I leave till afterwards, to avoid repetition. The greatest violence of it continued from the beginning of June, to the end of October; several however were still seized with it in the following winter, which being rainy and warm, favoured epidemic diseases; some severe instances I met with in summer 1756, and spring 1757. There is then no year altogether so favourable, where similar distempers do not occur.

*Of the Class to which the disease belongs;
and its cause.*

I have seen many febrile distempers, and have perused many accurate histories of fevers; and the more I consider the subject in my own mind, the more I am persuaded, that all primary fevers, without any exception, are either intermittent, inflammatory, putrid, or compounded of these. Nor can any objection to this doctrine be drawn from that enormous ca-
1
talogue

talogue of fevers, which has indeed retarded the improvement of physick, but has not in the least, by heaven's blessing, increased the number of diseases. For the very same distemper has been often distinguished by different names; at other times, which is mostly the case, the name has been drawn from the symptoms without any regard to the cause, and this has introduced as many appellations, as there are found violent symptoms in febrile disorders. While, notwithstanding this, every body knows, that the same cause may produce innumerable symptoms, in appearance very different, according to the degree of its violence, the variety of its seat, the peculiar constitution of a patient, the difference of climate, season, and above all, the different methods of practice; and yet all these are to be destroyed by the same weapon: the words of the great Boerhaave are very much to our purpose. *It appears that these diseases infinitely various if we regard their symptoms do not spring from so complex an origin,*

nor do they require such a variety either in their remedies or method of cure. ⁿ

It is easy to perceive that this epidemick disease of Laufanne, cannot belong to the class either of intermittent or inflammatory fevers, but that it was of the putrid kind: and our three species agree very well with the triple *Syneches* of the antients; one pituito-bilious, a second bilious, and the third atrabilious. For in all the patients we found the symptoms of a putrid ferment, or as the immortal Boerhaave chuses to call it, a spontaneous alkali, sometimes more, sometimes less exalted. The origin of such a cacochymy was threefold, 1. A retention of the perspirable matter, which is always of a putrescent nature, and by the laws of the human œconomy generally falls upon the intestines. 2. The relicks of animal food which has a natural tendency to putrefaction; and lastly the bile itself, *which of all the humours most quickly turns putrid, so that as soon as any putrefaction*

ⁿ Aphor. 1056.

arises in the primæ viæ, the bile is presently changed°, and whenever it has become putrid, it very quickly corrupts every thing else. Seeing then these three kinds of putrefaction agree perfectly in their effects, the diseases produced by them may not unjustly be termed bilious. *For where any putrid humour has produced a volatile salt and caustic oil it is called by the antients acrimonious bile*¶; and if we compare our epidemick with those which the best physicians have described under the title of bilious fevers, we shall presently discern the similitude; such are the hemitritei and tritophiæ of the antients; the mesenteric of the moderns, nay and all typhi, the lypiria, asodes, hungaric, gastric, and the ardent fever^q, all which, physicians have

C 3

with

° Ill. Van Swieten § 85. T. I. p. 121.

¶ Ill. Gorter. Compend. T. 37. § 13.

q All the antients and most of the moderns enumerate the causus or ardent fever among bilious fevers; Alberti says that a causus is the highest degree of a bilious fever. Junker, not to mention others, treats of the bilious fever and causus in the same chapter. But the illustrious Boerhaave by the causus or ardent fever, understands a general inflammation of the mass of blood; which I would have observed, lest it produce

with one consent attributed to bile accumulated about the præcordia, and have cured with medicines of a quality contrary to bile[†]. A bilious fever with a delirium, resembling ours has been even described by Hippocrates, in his book *de Affectionib[†]*. Several like cases are found in his epidemics, and it will be entertaining to quote what we meet with in his book *de Prisca Medicina*. *If there be an effusion of any bitter humour, which we commonly call yellow bile, what anxieties, heats, and debility ensue? What pains and fevers? and where acrimonious and eruginous humours prevail, what perturbations of mind do they produce? what shooting pains of the bowels and breast, and what depression of spirits[†]?*

an error in practice; for the treatment of an inflammatory caufus, and a bilious caufus differs widely.

[†] Some of the antients believed that a putrefaction never existed in the vessels, but always in the primæ viæ; they were persuaded of this by the effects of a vomit, which often entirely removes a fever.

[†] Foes. p. 518.

[†] Foes, p. 16. In many other places Hippocrates has accurately described bilious distempers, nor does he mention any other so frequently. See particularly Aphorism passim, and Galen Comment. Oper. T. 7. De Nat. hom. § 88 and elsewhere, Foes, p. 230. De dieb. judic. § 4, 5. Foes 57.

If

If we have recourse to the short but elegant descriptions of the illustrious Gorter, we shall find our disease entirely similar to those which he deduces from morbid bile: *A morbid humour, that is oily, saponaceous, sharp, heating, bitter, and of a yellow colour, is called bilious; this retained in the body creates loathing, nausea, putrid belching, a dry and bitter tongue, anxiety, bilious dysentery, shivering, watchings, a stupidity or delirium, head-ache, deafness, winking of the eyes, tremour, a quick or frequent pulse, a pungent heat* ^u, *and the want of a crisis* ^x. The celebrated Huxham to whom upon many accounts physic has been so much obliged, has these words. *In the month of August 1741, we had many putrid fevers (perhaps mesenteric) chiefly amongst the lower people and sailors, some attended with a high phrenzy, and these were by far the most quickly fatal. Such patients mostly had their bellies*

^u Physicians have always esteemed that pungent heat, the pathognomic symptom of putrid fevers. Hippocrates calls those fevers pungent to the touch, which are produced by a putrefaction of the humours. Pallas de Febr. cap. 30. nor is the reason obscure.

^x Especially System, praxeos Medic. § 130, 230.

swelled and were costive; thus the morbid matter was retained in the bowels. It was particularly wonderful to observe the great quantities of atrabile evacuated upwards and downwards^y. Excellent observations are also to be found in L. Tralles his useful treatise on the Inutility of Absorbents^z. But the excellent F. Hoffman has in my judgment best explained their generation, I presume it will be altogether acceptable to quote his words. *Amongst distempers from bile, corrupted and mixed with the blood, particularly fevers, and those named bilious deserve to be reckoned. And though fevers themselves generate bile, yet there is no doubt that they arise also from corrupted bile: We have for this doctrine the authority of Hippocrates. For in the first place it cannot be disputed, and we find also the consent of antiquity to it, that the proper seat and origin of most fevers especially intermittent, ardent, and those called bilious is in the first region of the body, about the præcordia, smaller intestines,*

^y Observat. de aere & morb. epidem. T. 2. p. 72.

^z Virium quæ terreis remediis gratis hæcenus adscriptæ sunt examen Rigorosius, c. xvii. § 88. p. 330.

cavities of the liver, spleen, pancreas, omentum; because in these parts the circulation of the blood is more slow, impurities are generated, and corrupt acrimonious humours flow from the pancreas into the intestines, and not only excite the spasmodico-febrile complaints common in hypochondriac people, but fevers also: for the symptoms which usually accompany these fevers, begin generally in that region^a. Who is ignorant of the symptoms of a spontaneous alcali pointed out by the great Boerhaave, and the excellent illustrations of his pupil^b. Among physicians who have treated of epidemick distempers, no body has described a disease more like to ours than the famous Walcarengi, a most successful physician at Cremona; it would be tedious to transcribe the symptoms; he ascribes its cause to the various tumults of outrageous bile; and at the same time to intestinal and pancreatick lymph of the worst qualities, which by adhering to the secerning ducts of the liver part-

^a De Bile medicin. & Venen. corp. human. § 27. oper. T. 6. p. 158.

^b Aphor. 85, 86, T. I. p. 119, 120, 130.

ly the cystic, partly the sides and folds of the intestines, and the stomach itself, chiefly its lower orifice, corrugates in various ways its fibrils, and forces them into violent contractions by its strong irritation^c. Neither will the violence of the distemper appear surprising, as the bile was predominant in it, for this humour being from its own nature more easily set in motion, more active and penetrating, wherever it is confined, greatly distends the parts, and by its strong ebullitions irritates, vellicates, lacerates, and excites a more ardent fever and more acute pains, by forcing the component fibrils of the solids into more violent vibrations^d.

It now seems to appear very plain, from what we have advanced, that the true cause of the epidemick distemper at Lausanne was a putrid, alcalescent, and bilious humour, endowed with a greater or less degree of acrimony, having its seat in, and irritating the stomach, smaller in-

^c Medicin. Ration. T. I. § 52.

^d Ibid. § 154. This being true in regard to the cause and effect, may perhaps be a little out with respect to the manner.

testines,

testines, particularly the duodenum, liver, gall bladder and ducts, mesentery and the other contents of the abdomen; and by length of time, strength of the disease, or bad management infecting at last all the humours, as is manifest from the history of the disease.

Examination of a dead body.

The dissection of dead bodies, which in many cases exposes so clearly to view the latent causes of disorders, was not so necessary in our disease, where there was no doubt concerning the cause; and this indeed was lucky; for to the irreparable loss of physick and mankind, there are few, who are so far superior to erroneous prejudices as to admit of it. I shall briefly relate, what appeared at the only opportunity which was given, as I had it from that ingenious physician my friend and colleague D. J. D'Apples, for I was then absent. The body was that of a man of forty years old, whom we had jointly attended for some time in this dreadful distemper, till about the 24th day,
he

he was delivered by his relations into the hands of a quack; who harrassed him with the most violent drastic mercurial medicines, under the title of an infallible panacea, and blisters till he killed him; I shall add some remarks of my own to the relation of this case. 1. *The external skin was livid, upon moving the body there was a great discharge of blood from the ulcer, which the blistering plaisters had produced in his back. In the thighs and legs were red spots and purulent humours like boils.* The colour of the skin, the hemorrhage and red spots prove a compleat colliquation of the blood. And indeed blisters were a very bad application at the end of a bilious disease, when the machine was already falling to pieces by a putrid dissolution. The use of mercurial remedies was not more proper, whose tendency is to dissolve and putrify every thing; but what then! Folly is inseparable from the character of a quack: the purulent tumours shall be taken notice of afterwards. 2. *There was a slight ecchymosis in the teguments and muscles of the abdomen on the right side, below the navel.* This coincides with the first article. 3. *The fat*
was

was yellow and tinged with bile in every part of the body. This shews the effusion of the bile every where, and a total corruption of the fat. 4. The liver and spleen were found, the gall bladder turgid with a great quantity of bile, the mesenteric glands were enlarged and of a reddish yellow colour; the stomach was distended, and as it were divided into two bags, full of a black liquor, the intestines were inflated, but they were not opened. This article contains several things, which give light into the cause of the distemper. Opening the intestines would probably have discovered an injury in the duodenum, for that was generally the principal seat of the distemper. The division of the stomach into two bags occurs so frequently, that it can hardly be placed among the morbid alterations. Several other observations, very judiciously and accurately made upon the contents of the thorax and head, I shall entirely omit, because they do not in the least illustrate the nature of the disease. If any body should wonder that the parts about the præcordia

were

were not found in a worse state, let him attend to the words of the famous J. A. Borelli in that epistle, where he relates to the celebrated Malpighi the history of an epidemic fever, resembling our bilious one, which raged at Pisa in the year 1661. *In four bodies, at the dissection of which I was present, there was no remarkable injury to be seen in the lungs, excepting a dryness produced perhaps by the heat of the fever; in other respects they appeared sound. The mesentery in like manner and its glands were neither putrid nor corrupted as was suspected. The substance of the liver also and spleen was not in the least tainted. The gall bladder was remarkably turgid (did this happen from the spasmodic constriction of the biliary ducts) and besides in the stomach there floated a bilious humour, and in some the intestines were tinged with a yellow colour.* From the observations upon fevers in that immense collection of the dissections of dead bodies, long ago published by Bonetus it is easily seen, that in very many cases the morbid appearance

* Vid. Malpighi oper. posthum. 4to. 1700. p. 27. and seq.

assigned for the cause of the disease was every way inadequate to the production of it, and that the true one was not discovered, because hardly perceptible. Nor will this appear strange to any body who knows,

1. The sensibility and irritability of the whole intestinal system.
2. How very difficult it is to discover the morbid alterations of the humours, which seldom fall under the cognizance of our senses.
3. What considerable changes in respect of the tension of the fibres, and the place of the fluids follow upon death.
4. With what violence, a cause, scarcely discernible to the external senses, may act upon a living body, if it be in contact with denuded nerves or muscles.
5. In fine, how quickly a period may be put to life by an injury done to vessels so minute, that they have hitherto escaped the sight of men who have seen so many small ones, Ruysch, Morgagni, Albinus, and Haller. It must be confessed however, that other observers have discovered greater injuries in similar distempers. Thus while Lancisi and Guidetti examined the bowels of those who had died by bilious fevers, *they found*
the

the cystic bile not only become black, but also sometimes concreted like pitch, frequently very fetid, and depraved in a thousand other ways, and the liver particularly of a brownish colour †. But let this suffice for the cause of the distemper, we shall now proceed to the cure of it.

The Method of Cure.

The first Species:

There are some distempers, in which if we neither suffer the vital strength to exceed its due bounds, nor grow deficient, and prescribe a proper diet, the morbid matter is spontaneously concocted, and after that expelled by a natural crisis. Such are all true inflammatory diseases, in which even now as well as in the days of Hippocrates, any person will observe a regular order in their crises, if he have learned their nature and method of cure from Hippocrates, and will neither rashly nor improperly raise any commotion, or force

† Bianchi Histor. hepat. Part III. p. 231.

any evacuation, but will be content with the mildest diluents alone, applied in all forms; beginning at first with bleeding, if it be necessary, which is seldom the case; and not be solicitous to expel, by vomiting, purging, urine, or the more subtle outlets of the body, the cutaneous pores, the phlogistic blood obstructed in the brain, breast, or other viscera: nor attempt to resolve the humours inspissated by the brisker vibrations of the solids, by those acrimonious solvents, which irritate the fibres to new motions. I have often with pleasure admired these critical changes appearing at the prefixed time, and not varying in the least from that series, which has been pointed out by the parent of physick. But I must confess, I never observed them, unless both I and the patient remained inactive. And I frequently did so, being well assured, that sometimes the best remedy is to make no attempts by medicine^s. But this would not always prove successful, nor would it have succeeded in our distemper; for re-

^s Hippocr. de Articul.—Wise men are not ignorant what it is to be inactive in a medical sense.

peated experience has taught us never to expect a crisis in putrid, erysipelatous, and malignant fevers. *In the cure of mesenteric fevers, I have often seen, says Baglivi, that it was to no purpose to attend to the critical days their influence and power*^h: and Junker has observed, *that bilious fevers may be referred to those kinds of disorders in which the power of nature herself is obliged in some measure to yield to art*ⁱ. It is as I already said an inflammatory disposition, which being gradually subdued by mild dilution and a continued moderate action of the vital powers, is spontaneously evacuated; on the contrary, the fuel of putrid fevers becoming continually more pernicious by the action of the vital powers, and process of time, produces daily more dreadful symptoms, unless art supply what is deficient in nature; for it is necessary to procure those evacuations, which in inflammatory cases follow spontaneously. Whence then arises this difference? whether from the different structure of the parts affected? or from the

^h Prax. Med. L. I. de febr. malig. & mesent. p. m. 52.

ⁱ Conspect. Medic. theoret. pract. tab. 62. p. 510.
different

different nature of the morbid matter ; or lastly from this, that the action of the nerves is totally depraved by the putrified humours? Indeed he who deduces this difference from these causes conjunctly, is, in my opinion, not greatly mistaken. But of these perhaps I shall treat more copiously elsewhere.

THE cause, we have mentioned, pointed out two indications, either to correct the putrid ferment, that is, to change its quality so, as to prevent its being noxious; or to evacuate it; *for corrupted bile, accumulated about the præcordia, brings on dreadful fevers, which are never to be cured unless that putrid ferment can be removed*^k. An alterative method is sufficient, when the morbid matter being small in quantity, is only hurtful by its acrimony; thus in the diseases of infants arising from an acid, absorbents are the best cure. But this was not our case, for the morbid humour was prejudicial both by its acrimony and quantity. Any evacuation is sufficient, if by it the cause

^k Van Swieten, § 99. T. I. p. 141.

of the distemper can be entirely and at once discharged, which was impossible in our disease, while all the humours lodged in most of the abdominal viscera beyond the laws of the circulation were infected by the morbid taint. It behoved the physician therefore constantly to endeavour to alter the quality of the morbid matter in such a manner, that if he could not entirely destroy its deleterious quality, he might at least weaken it much; and as soon as it became capable of motion, evacuate it. *For the principal remedy in this fever is a timely evacuation of the caustic bile, for the consequence of that is, that the violence of the fever abates; on the other hand there is a very great danger in delaying this excretion*¹. Accessent drinks were sufficient for the alterative indication. There was no room to hesitate concerning the particular kind of

¹ Mich. Alberti Praxis Universal. sect. ix. cap. vi. § 4. I would observe that this good man has several useful cautions concerning bilious fevers, and at the same time many gross errors arising from the system about the corruption of bile, which he believes to be acid, when the truth is, acids totally destroy it; the same error attends the doctrine of all the antient Stahl-ians, which is worth remembering.

evacuation; that was undoubtedly the best, which operating both upwards and downwards, evacuated in two ways at once. Nature pointed it out, and Hippocrates had even taught, that bilious diseases are not to be cured but by carrying off the bile by vomiting and purging^m. The loathing and nausea abundantly demonstrated the bad condition of the stomach; nor was vomiting serviceable only by evacuating, but it was also very useful from the concussion which it gave to the abdominal viscera; for by these means the morbid matter impacted in the folds of the intestines is attenuated, dissolved, and squeezed out. *The very action of vomiting also*, says Huxham, whom I have already commended, and in whose praise I can never exceed, is *apt to open obstructions even in the inmost recesses of the body, attenuates all the humours, and promotes all the secretions; and whilst the stomach loaded either with an acid mucus or bilious colluvies, hath almost quite lost its tone, like an inert bag imbued with a putrid ferment,*

^m Ardent fevers are not removed but by vomiting and purging bile. Prænot. § 120. Confer. Bagliv. lib. citat. p. 56, 57.

*it corrupts every thing which is put into it, and continually foment the disease till it is thoroughly cleansed*ⁿ. Vomits are considered in the same light by many others, the following, men of character in the profession, Fernelius, Riverius^o, Friend^p, Boerhaave^q, Ludwig^r. The words of Fernelius in particular excellently illustrate our present doctrine. *Easy moderate vomiting is very salutary, and the most eligible of all evacuations, for it forces out and evacuates the noxious humours unmixed from their very sources; every kind of filth in the cavity or coats of the stomach, it peculiarly cleanses away; draws out from the membranes of the præcordia, the cavities of the liver and spleen, and from the pancreas all kinds of redundant humours without any mixture; which for the most part neither hiera picra, nor any other the most violent remedy, even frequently re-*

ⁿ Observ. de Aer & morb. epidem. T. I. p. 21.
23, 25.

^o Institut. lib. 5. P. I. Sect. 2. cap. iv. p. m. 131.

^p Com. de Febrib. No. iv. p. m. 19.

^q Aphor. 1244.

^r Institut. § 1541, 42.

peated, is able to force downwards by stool *. How necessary evacuations are in these distempers all antiquity acknowledges, and above 2000 years ago Hippocrates has prescribed them †, and after him Galen, and all the rest; particularly in the 4th century ‡ Alexander Trallianus §. The moderns have adopted a like method of cure. Borelli observes that no body escaped but after an evacuation of bile †, which however he did not attempt to promote by a vomit, which gave occasion to the following judicious reflection of the ingenious Glafs, *I cannot but wonder, says he, that Malpighi and Borelli never thought of dislodging the bile and evacuating it from the stomach by a vomit, when they were satisfied that the whole of the disorder resided in the bile. Surely it is fair to conclude from the history*

* De Morb. eorumque caus. lib. iii. cap. 3. oper. om. p. m. 210.

† *As long as the bile continues within, is not concocted nor corrected, neither the pains nor fever can by any art be removed.* De Prisca Medicina, cap. 35. Foes, p. 16. Confer. Foes, p. 396, 473, 489, 519, 534, 547, 1139, 1152.

‡ De Arte Medic. lib. vii. cap. xvi.

§ Loc. citat. confer. Bianchi histor. hepat. p. 282, 702.

of the disease that many perished for want of it ^y. The illustrious Hoffman has two indications; to cleanse the primæ viæ, and obtund the bile ^z. What particular method, in conformity to these principles, I followed in each species I must now relate.

ALL the sick had been ill for several days before they sent for a physician, so that I often prescribed a vomit at my first visit; it operated well enough, yet did not always answer my wishes; for the evacuations were not sufficient in quantity, nor were the anxiety and nausea removed; and three or four times when the fever first began to grow epidemick, it was necessary to prescribe a second dose after an interval of some days, which was not the case afterwards; for when I was considering with myself the cause of this phænomenon, I received some light from Hippocrates's doctrine of concoction, and the following judicious observation of Van Swieten. *I well*

^y Comment de febr. 7. p. 116. Read also the ingenious Grainger's Histor. febr. Anom. Batav. p. 73.

^z De duoden. mult. morb. causa § 20. oper. T. 6. p. 194.

remember, says he, when after a most violent hot summer, bilious fevers were epidemical and attended with a troublesome nausea, and an almost constant vomiting, that I sometimes gave a vomit immediately, without any relief; but when for one or two days I had made use of oxymel or such like medicines, diluted with a large portion of water, the corrupted bile was frequently evacuated by a spontaneous vomiting, inspissated almost like glue; or it was easily expelled by a gentle emetick given a second time^a. Paying no regard therefore to the trifling objections of some moderns, I applied myself to forward the concoction. That we may the better understand what concoction in a bilious disease is, I shall make some observations concerning concoction and turgescence in general.

CONCOCTION in diseases, for we don't treat here of the action of the stomach, ought to be reckoned of two kinds; the one respects a mitigation, and the other an evacuation; for it is sometimes sufficient to correct the noxious qualities of the mor-

^a § 644, l. 2. p. 225.

bid Humour; then it is said to be concocted, although no evacuation follow; nay such a concoction often renders the humour unfit for an evacuation; to this class belongs concoction in diseases of the solids. Again, a concoction respecting an evacuation is also of two kinds; for sometimes it is necessary to attenuate and render fit for motion, the morbid matter, when it is gross, glutinous, and tenacious, before it is safe to attempt its expulsion; and while the humour is thus dissolved, an acrimony is frequently generated, whence it appears, that a concoction in respect of the disease, is really different from that towards evacuation. On the contrary, we more often find the morbid humours so active and acrimonious, that we must forbear evacuants as we would avoid poison, lest by raising even the most slight irritation, they become ungovernable, and being impelled every where with the greatest violence, bring on quickly irreparable mischiefs. In such circumstances their acrimony is to be mitigated, and their tendency to motion restrained; this species of concoction for evacuation, resembles that in respect of a disease.

disease. The first kind of crudity may be called *a crudity below evacuation*; the second *a crudity above evacuation*.

TURGESCENT is likewise of two kinds, one respects quantity, and the other motion. The humours are turgid, whether crude or concocted, if by their quantity they impede either all, or only some of the animal functions; they are also said to be turgid, and that in respect of motion, when by their acrimony and activity they violently stimulate the parts, and cause irregular motions, even though their quantity be small ^b.

FROM the few particulars with which Hippocrates was acquainted, and which diligent observation has confirmed, it is easy to perceive that the humours in our first species, were turgid principally by their quantity, and were in the state of *crudity*

^b The celebrated Glass defines turgescient matter as *something troublesome stagnating in the primæ viæ, which may be discharged either upwards or downwards, and which frequently stimulates the stomach or intestines to its own expulsion.* Comment. de febr. 7. p. 102.

below evacuation; I was obliged then to render them fluid and fit for motion before evacuation; unless there was the highest turgescency which was seldom the case; I attempted this by the use of attenuating and antiseptic remedies of the class of those called digestives *, and this was generally

* Digestives are those medicines, by the proper signification of the word, which assist the action of the stomach in the concoction of the aliments; and as this word is used in two senses, thence also they have called those medicines digestives which promote the concoction of morbid humours; and not improperly indeed; but as they considered only *the crudity below evacuation*, they have confined the class of digestives to saline, attenuating and pungent medicines, or useless absorbents, which is certainly a great error, for there are as many classes of digestives, as there are species of crudity; and in *a crudity above evacuation* there are no other kind of digestives, but such as have the power of condensing, sheathing, and restringing, as will appear afterwards, and was well known to Hippocrates; for his doctrine concerning concoction was, that the morbid humour should have such an aptitude for motion, as to yield easily to evacnants, and yet not to exceed in that so, that any mischief could follow from its ebullition. Galen is every where of the same opinion; he concocted the bilious humour with cold water, and the pituitous with pepper. Method. Medend. L. II. Ad Glaucon. Lib. II. De Sanitat. tuend. Lib. IV. Sennertus has also some valuable observations on the same subject, though despised by most of the moderns, de febr. Lib. II. c. vii.

the form of the prescription, that they should take a paper of powders every three hours, and drink after it four ounces of a decoction. The powder was composed of Tartar. regenerat. tartar. vitriolat. crem. tartar. and other things of a like tendency; I frequently also prescribed the Sulphur Aurat. Antimon. prepared in Untzer's method, and mixed with sugar and one of the fore-mentioned salts, which succeeded very well. The decoction was made from the roots of grass, sorrel, wild succory, or the leaves of maidenhair with tartar. regenerat. or oxymel simpl. some slices of fresh citron peel correct very well the nauseous taste of the grass, and are, for that reason, not to be omitted, if we do not add the oxymel. Where the form of an electuary was more agreeable, it consisted of the acescent preserves of sorrel, wood sorrel, the liquid extract of dandelion, and some neutral or acid salt; for the proportions of the compound were always directed by the symptoms, which indicated the greater or less exaltation of the bile or the degrees of viscosity. If after two, three, or four days, the shivering grew milder,

milder, the covering upon the tongue less tenacious, the urine turbid, the belchings fetid, and the nausea frequent; if there were wind and rumbling in the bowels, and the stools were more copious, it appeared, that the humour had obtained an aptitude for motion; and I then prescribed an emetick potion. At first for some time, I used Ipecacuan, but I presently found that this celebrated root had not in this case sufficient force; it had besides this bad property, that after the evacuation was over, it left the patient costive and sometimes thirsty; I was therefore glad to change it for the emetick tartar, which I hardly ever drop'd after that: the dose, being proportioned to the age and other indications, was dissolved in eight or ten ounces of water, with an addition of a sixth part of syrup of Capillaire. I directed the whole to be drank at two, three, or four draughts; and this method of dividing the potion succeeded happily in so great a variety of sick people as I attended, the generality of whose particular constitutions, I was till then entirely unacquainted with. And I particularly remember that a noble foreigner,

er, whom I had ordered to drink a fourth part of the medicine every half hour, after the first draught, was with great facility for two hours with a continued stream almost, purged both upwards and downwards, and his health restored in a short time; now this patient would undoubtedly have suffered a violent superpurgation, if he had taken the whole dose at once, as it is often prescribed. There was another advantage attending this medicine, that being palatable it was not in the least nauseous, even to children and more delicate people. I sometimes made an addition of manna, though the solution of tartar alone seldom failed to procure stools, which I always reckoned of great importance; for besides, that in this way the much larger quantity of morbid matter is evacuated, it is the method nature points out for discharging the relicks of the morbid matter^d. The

^d The celebrated Pringle has made the same observations. *The vomits that are also productive of stools, are the most useful, but especially if they are powerful enough to procure a plentiful discharge upwards or downwards of the corrupted bile. By this means they sometimes effect a cure, without farther medicines.* Obs. on Diseases of the Army, P. III. ch. IV. § 5.

effect of the remedy was, that generally in little more than half an hour; that is, some time after the second draught, there was an inclination to retch, which was followed by vomiting; and if the quantity of the discharge was judged sufficient, the remainder of the potion was not used; if not, it was drank; the vomiting brought up viscous matter mixed with yellow, bitter bile; then followed stools of liquid, yellow, fetid excrements. I often encouraged the vomiting, by plentiful draughts of hydromel; when it ceased, I promoted copious stools by giving at a spoonful each time what remained of the potion diluted in a large vehicle. Thus after the evacuation was over, the patient found himself better, with regard to his anxiety, debility, and sleep. The same method was followed by that celebrated practitioner, Walcarengi, and has been recommended to posterity by G. E. Stahl, *for the method of cure, adequate to the removal of the peccant matter in these fevers, can be no other than vomiting and purging*.

• De febre biliosa, § 46.

And I can truly say that I have very often seen one vomit accomplish, what repeated purges have failed in. I remember a woman, who, without calling a physician, had taken five times, at the distance of two days each, a purging draught which she generally made use of, consisting of rhubarb, Sedlitz salt, and citron, and found not the least benefit from it; but she was presently relieved by a vomit.

AFTER the first evacuation the digestive remedies, mentioned before, were again prescribed; for when the concocted matter was expelled, it was requisite to mature what continued crude; and I never failed to observe, that those medicines, which before had hardly proved cathartic, having their force encreased by the diminution of the morbid matter, produced at this time two or three stools every day, always of a putrid nature. The languor was gradually diminished, and also the length of the paroxysm. After three or four days, if a plentiful discharge of urine afforded the signs of a concoction, we had recourse to purging by salts, manna,

E

tamarinds,

tamarinds, and now and then a small dose of senna. Sometimes when there was reason to expect that stools would be easily procured, it sufficed to dissolve two ounces of manna with some salt in their common drink in the morning; and a copious discharge of excrements following from that, there scarcely remained the form of a paroxysm; the skin grew soft, their sleep became composed; they no longer loathed their food, though they had not yet any desire for it. The natural heat was more slowly restored, and they were almost always cold. Then they took only a dose or two of their medicines every day; all the symptoms went off gradually, the bilious stools which were so salutary still continued, and both evacuated the morbid matter, and shewed that the viscera recovered their tone; for it was with us, as the famous Gallarotti observed it to be at Cremona, *we could safely hope for a compleat termination of the fever, only while the stools continued bilious* ^f. And indeed if we fell short of this
happy

^f *Method. Aur. febr. profligand.* De febr. tertian, &c. § 17. A useful treatise to be found at the end of Wal-

happy appearance, I was obliged both to give the digestives longer, and in a larger dose, and to repeat the cathartic a third time, nay sometimes, but very rarely, a fourth time. I don't remember an instance of a fifth purging being used. In lax constitutions, which laboured more under a viscosity than acrimony, I sometimes avoided aqueous liquors after the first purging, and ordered a potion composed of a large dose of tartar. regenerat. a small quantity of Elixir proprietat. with the distilled waters of Succory and Citron-peel, and compound syrrop of Succory, adding Oxy-mel, when the circumstances required it.

I did not in all cases prescribe a vomit, for there were some patients, in whom I found contra-indications to forbid it; but then before the catharticks properly so called were given, it was necessary to con-

Walcarenghi. How little to be trusted a mitigation of the symptoms is in ardent bilious fevers as long as there are no bilious stools, we may learn from the case of Herophytus, who laboured under such a distemper with various remissions till after the hundredth day, when he had great plenty of bilious stools. De morb. vulg. Lib. 3. § 3 ægr. 9. Foes 1106.

tinue the digestives for a longer time. For those who were purged too soon without a previous vomit, generally suffered for it. I was inclined to order the emetick tartar to a venerable man, who was ill, on the sixth day of the distemper (for I had not been called at the beginning) but the method being changed by the advice of another physician, the patient took a purging medicine; the disease proved tedious, and was followed by pains of the stomach, and a mucous dysentery in Autumn, which I do not remember to have happened to any of those, who took a vomit and were properly treated after it.

THEY who refused medicines, and after the first vomit laid aside all remedies unless perhaps toast and water or lemonade, of whom there were many, having the morbid matter lessened by means of the diet, which their loathing directed them to, gradually got the better of the fever indeed, but they recovered their health slowly, and imperfectly; and several of them were obliged after some months to have recourse to medicines, but of these afterwards. I thrice observed

observed in younger people that symptom, which Sydenham mentions ^a, to wit, a tumid abdomen, when the distemper was going off favourably at Lausanne as at London; but our patients complained of an increase of pain upon touching the teguments, which was not the case in London.

If it was dangerous to give over evacuations too soon, it was also dangerous to continue them too long; and a man would be miserably deceived, if he imagined they were to be persisted in, till the appetite and strength were entirely restored. The inappetency and debility arose in the beginning of the distemper from the cacochymy oppressing the stomach and primæ viæ; and now at the end of the disease they were owing to a laxity of the fibres, the languor of the secretions, and a defect of good juices in the body. We must therefore here attend to the caution of Boerhaave, *what does good at one time, may yet be hurtful, if given at another, though in the same distemper* ^b,

^a Oper. Sect. I. cap. V. p. m. 60.

^b Aphorism 849.

and we had a sad proof of this by experience. For while some continued the opening medicines with a view of discharging the morbid matter, which they blamed for these complaints, I have seen the disease protracted, the debility increased; and the excessive irritation of the gastric and intestinal nerves followed by the whole train of irregular spasmodick symptoms. These I never observed, if the catharticks were dismissed in proper time, and a suitable diet with exercise in the country, and some strengthening medicines were made use of. An infusion of bitters in wine was taken with great success. Sydenham in a like case used opiatesⁱ, but I thought it more

ⁱ De Nov. febr. ingressu, p. m. 367. *In many cases where the cure is wholly performed by evacuations, if we persist too obstinately in them, till such time as we have removed all the symptoms, we more frequently kill than cure our patient, &c.* and no wonder; an appetite is the function of a vigorous stomach, which is never found, where that is weak and languid; while then the appetite is deficient, the digestion must be so too; nor will cathartics, so destructive to the strength of the stomach create one. This I would have attended to by those, who immediately draw indications of evacuating from a loathing, nausea, anxiety, diarrhea, and lentergy; and thus make bad worse.

cautious to abstain from them, for they are hurtful in a debility, and are but a bad cure for tumultuous commotions.

The second Species.

IN the second species the viscosity of the morbid matter was less, but its tendency to motion greater; evacuations succeeded more easily, and it was often proper to make them at first; for there was sometimes danger in a delay. At other times however, it did good to give the diluent digestives with hydromel acidulated for twenty-four hours. If there was reason to suspect a great degree of acrimony from the troublesome heat, thirst, wandering pains of the bowels, and the urine, I added to the solution of emetick tartar, pulp of Cassia, or citron-juice, instead of the capillaire. For the first days frequently, before a vomit was given, scarce any time of remission could be observed; afterwards the appearances were much changed for the better. A servant maid of about six or eight and twenty years old, of a good constitution, after she had been extremely

cold with a trembling for some hours, was seized with a violent head-ach, a quick, and contracted pulse, a burning heat in the skin, frequent nausea, thirst, paucity of urine, and costiveness; an apothecary being sent for prescribes a cathartick, nitrous powders, emulsions, and bathing the feet in warm water, but all to no purpose, the violence of the distemper does not in the least abate: On the fifth day I visited the patient, and ordered her emetick tartar with twenty ounces of water, and two of citron-juice. Of this she was to drink three ounces every quarter of an hour; she discharged an immense quantity of excrementitious matter upwards and downwards; the following night she slept; on the sixth day her pulse was softer, higher and less frequent; she had only a slight head-ach, and her thirst was gone, she had then a remission; in the evening the paroxysm returned. On the seventh, the former draught with half the quantity of tartar, and drank at longer intervals, procured several stools, the evening paroxysm was milder; on the eighth and ninth day she took only lemonade, and on the ninth had

a clyster; on the tenth the purging ptisan given on the seventh was repeated, and she mis'd the paroxysm. On the eleventh, twelfth, and thirteenth days, every thing went on prosperously; lemonade was all that she required; her stools were bilious, a sure sign of returning health. And now she had the uncommon good fortune to recover her appetite, which however she indulged too much; the consequence of which was, that on the night of the thirteenth day, the fever recurred, with a pungent heat, and violent head-ach, which continued for a whole night and day; upon the remission of the paroxysm, I gave her manna with tamarinds, she recovered very well, and more quickly than any other person.

For the most part, after the first evacuation I seldom prescribed any thing else, except strong lemonade, or a decoction of the roots of quick gra's, with an addition of the expressed juices of common sorrel or wood sorrel; *for the juices of citron and sorrel resist putrefaction, are of peculiar efficacy to strengthen the heart, correct the febrile heat;*

beat; and possess an opening quality *. They drank this or such like liquors to the quantity of two ounces every half hour or oftner, for I never approved of giving sick people plentiful draughts at long intervals. The method of drinking frequently and little at a time, was highly approved by the antients; and after falling into disuse, for what reason I cannot tell, was restored by some excellent physicians of the sixteenth and seventeenth century, and Boerhaave established the practice upon solid principles; 'tis worth while to read his illustrious commentator ¹ upon the advantage of this method. Such as refused the drinks mentioned before, received benefit from barley water mixed with syrrop of rasberries, or acid cherries. In fine all

* Sennert. de febr. Lib. ii. cap. vii. p. 221. You'll find in the same place what's worth observation, *that sometimes the putrefaction and heat were predominant, at other times other disorders.* In the first case I used citron juice, in the second preparations of sorrel.

¹ § 640 t. 2. p. 215. Alberti treating particularly of the bilious fever, says, *Let the quantity of drink be sufficient, only not given in large draughts, 'tis best to suck it in, or take it by a spoonful at a time, but to repeat it frequently.* Prax. gener. Lib. ix. cap. vi. § 9 and 25.

acid

acid drinks, that were not too emollient, answered extremely well. Of this kind the best is prepared from the juice of summer fruits with water and sugar; nor do I know a more excellent remedy in all bilious, nay and inflammatory distempers than the saponaceous acid juices of mulberries, bramble berries, raspberries, currants, strawberries, cherries, and grapes too, provided they are not too ripe; their virtues are the same, as all acescents, they correct every kind of putrefaction, and by their saponaceous quality resolve all bilious and inflammatory concretions, and promote all the secretions; nor do they relax the solids too much, for they even possess, from their grateful flavour, and fragrant odour, a cardiac virtue. *The juice of ripe fruits requires no preparation, removes thirst, allays heat, promotes urine and stools, and affords the highest cordial to the stomach languishing from putrid bile^m.* In the month of July 1756, I cured an amiable young lady, who was very ill, by the use of cherries and some opening medicines. Neither in

^m Van Swieten, § 88. t. I. p. 126.

this

this do I boast of any new invention; even antiquity proclaims the salutary effects of fruits, and what wonder! when persons in fevers are taught nothing more plainly by a salutary instinct. Alexander of Tralles has in many places given excellent rules for their use, scarce to be equalled among the moderns. 'Tis true indeed there lived in his time, and before him a pestilent race of men, who found fault with every thing that was laudable, as appears from a passage of the same authorⁿ; nor were there wanting afterwards physicians of great character, who declared against them, from the most trifling reasons; the only one which deserves consideration, is drawn from the aphorisms of Sanctorius, for he somewhere^o mentions melons, figs, and grapes as obstructing perspiration. The answer to this is obvious; fruits have not the same effect on every body, and I would be far from recommending them to all; for as they afford an acid water to the body, they hurt all those, whose stomach is oppressed

ⁿ De Arte Medica, Lib. xii. cap. vi.

^o Medicin. Stat. Lib. III. Aphor. 25, 27.

with an acid, whose blood is thin, fibres too lax, and nerves languid; by cherishing the causes of the disorder they undoubtedly do great mischief, disturb the secretions and excretions, interrupt perspiration, increase the acid acrimony, and I have more than once seen the use of them followed by dysurics, itchings, and wandring pains. But if the circumstances be changed, their effects also vary; and while in bilious cases they remove the cause of the distemper, by restoring health, they restore also its functions, and among the rest perspiration too. Boerhaave the restorer of so many good remedies recalled into the practice of physick, not without the clamours of envious ignorance, the use of fruits, which had been laid aside^p. Nor have I forgot that while I attended the forementioned young lady, a clamour was raised, which could be silenced only by the successful event. A student at Leyden was seized with so great a stupor night and day, that even when he was playing at billiards, he would often fall asleep; there are some physicians, who

^p Van Swieten, *ibid*.

would have ordered him vomits, smart purges, stimulants, viper-broth, and things of a like nature; he went to Boerhaave; that great man prescribes cherries for his food, to the quantity of ten pounds and upwards in the day, and nothing else, with an intention no doubt, of subduing the phlogistick density of his blood, the cause of his distemper; the worthy young man found himself better; and a short time after he passed in great plenty turbid and thick urine with a sediment, and perfectly recovered his health ⁹.

AFTER the vomit, if I found by a careful examination of the symptoms, by the state of the abdomen and the excretions, that the remaining part of the morbid matter was not very fit for motion, I ordered no evacuating medicine but a clyster in case the patient had not a stool each day, and in this method I persisted for four days; after which I gave a potion with ta-

⁹ This truly useful observation communicated by the patient himself, and not extant either in the works of Boerhaave, or his pupils, I thought would be acceptable to every body.

marinds, manna, and tartar. regenerat. to the better sort of people, with a decoction of grafs and an acid fyrrup. This discharged plenty of fetid matter, and the more the better, for the fymptoms remitted, and there often followed a perfect inter-miffion for fome hours, which I did not otherwife obferve before the third evacuation, about the eleventh or twelfth day of the diftemper. Then the acid drink was prefcribed in fmall doses, and the ftrength being in fome degree reftored, they were not fo rigidly confined to their fpare diet, and about the 19th or 20th day, they took their leave of medicines by the fourth dose of purging phyfick; the relicks of the dif-eafe were fubdued by diet and exercife; but they did not however recover their health perfectly, fooner than fix or feven weeks; after which time I again gave them a gentle cathartic, if they had indulged their appetite.

I have obferved, and no praftitioner is ignorant of it, that there are fome particular conftitutions, which will not yield to catharticks in a liquid form: in fuch
cases

cases I had recourse to bolusses of tamarinds, and Cassia, to which I added as a stimulus a few grains of diagrydium. Those people may exclaim against this, who learn the virtues of medicines from certain modern compilers; but they who are accustomed to practice, and acquainted with the writings of the antients, know very well that diagrydium is the best remedy, wherever tenacious bile is to be dissolved and discharged; and that Hippocrates never treats of the evacuation of bile without prescribing diagrydium^r. And indeed whenever I ordered it, the success was answerable to my wishes, for it procured bilious stools in great plenty, without producing any gripes or heat.

IF the morbid matter had a greater disposition to motion, I then gave every two days, or even every day, a weak purging decoction with tamarinds, to the quantity

^r Confer. v. g. de Natura muliebr. Foes, p. 575. De Morb. Mul. ib. 642. De Affectib. De intern. affect. ib. 548, 558, 560. Alex. Trallian. Lib. vii. c. xvi. Ætius Tetrab. 3. S. 4. c. xxviii.—Galen de compos. Pharmac. Lib. II. cap. xi.

of three ounces at six, eight, and ten o'clock, nor did we ever miss of two or three large stools in the afternoon; by the use of such a ptisan alone I cured a patient, the history of whose disease I beg leave to relate. A young man of twenty and upwards, who lived in the country, was taken ill near the end of autumn; at first the fever was continued, with exacerbations every day; the person, who attended him, being deceived by the regularity of its form, gave it the name of an intermittent, and first prescribed purges of senna and rhubarb, then bitters of all kinds, particularly conserve of Juniper, and Peruvian bark in a large dose; as he grew worse I was sent for on the 18th day, when I was informed that the paroxysm came on about two or three in the afternoon, and lasted till six next morning, with a burning heat, a violent head-ach, cough and continued watching. From six in the morning to two in the afternoon, he was free from the fever, but he had an anxiety, moroseness, and loathing of food, with a quick pulse, and a dry skin; he was greatly emaciated, his cheeks were red, he coughed, was costive,

F his

his urine red, and small in quantity, was extremely weak, and in danger of a consumption. Omitting the bitters and bark, I combated the cause of the distemper by evacuations only, and prescribed four ounces of a decoction of grass roots, sorrel, and pulp of tamarinds, with salt of sorrel and fyrrup of raspberries, to be taken four times a day. This brought on bilious stools; the second day after this method was begun, the paroxysm was milder; on the third he slept, had an appetite, and was easy; in ten days he was perfectly recovered: now this same person in a short time would have died from an atrophy, if he had continued the bark, which, though a very salutary medicine, was in this case improperly administered. Baglivi*, has already condemned the bark in diseases arising from infarctions of the mesentery and bowels. Without doubt there is not a more excellent strengthener than the Peruvian bark, nor any medicine of equal

* Prax. Med. Lib. I. de febr. mesent. p. 58. de fibr. motric. spec. tr. poster. libr. cap. 13. p. 388. Confer. illustr. Oosterdik Instit. medic. pract. sect. I. cap. iv.

virtue to it in quieting disordered motions of the nerves; its effects astonish every body in relaxations, and irregular tumults; but what can the most powerful corroborants do against distempers, whose cure depends upon evacuations. There is a proper time for giving bitter strengthners in our malady, but that is never in the beginning of it.

THE famous Walcarengi employed a method of cure similar to ours; that is medicines composed of grass, succory, and citron, all of the acescent kind. There is one remedy however that he used frequently, which I never dared to make trial of, I mean oil of sweet almonds, which he prescribed after the first evacuations, *unless there was tenacious and viscid bile near the biliary ducts, and in the intestines themselves*†. This great man had taken it for granted, that *wherever the morbid humour stagnated, it created a great distension of the parts, irritated, pricked, and lacerated them*. That is true, but is it a just inference from thence,

† Medicin. Rational. § 341.

that we must give oily medicines? I believe not; they have indeed the power of relaxing tense and rigid parts; but in the present case by increasing the strength of the irritating cause, their effect is quite different. For such is their nature, that whenever there is great heat in the body, they quickly lose their emollient and soothing quality, and acquire a rancid acrimony; and thus verify the proverb *of adding oil to the fire*. Their use in bilious distempers is discouraged even by the observation of Hippocrates, *that those who abound with fat, generate yellow bile*^u. Galen informs us, that in his time there were several disputes about the use of oil, some believing it to be acrid and heating; others soothing; and this he has intimated to depend upon the variety of the constitutions where it is given^x. I perceive the Italian physicians in general are fond of oil, notwithstanding Baglivi condemned it; yet there are some few amongst them who agree with him; thus Bianchi, in treating

^u Epidem. Lib. vi. § 6. Foes, 1190. A.

^x De Simpl. medicam. facult. toto secundo libro.

of bilious fevers, says *I have observed that after taking oil of almonds in broth many people had their heat much increased*^y. Prime-rose was suspicious of oily medicines and almonds in fevers, for fear of their rancidity^z, and in a word the most celebrated practitioners, in distempers attended with a great heat, are afraid of oils; for the truth of this we may appeal to Van Swieten^a. How carefully then ought they to be avoided, when the very center of the febrile heat is the part, to which they are applied; where the putrid ferment is prepared to forward their corruption; when there is danger of an obstruction in the liver, which they will promote. Last year in autumn I was witness to the death, rather than physician to the distemper, of a woman who perished by a violent inflammation of the liver, which she had brought upon herself by eating hardly any thing

^y Histor. hepat. P. 3. p. 698. Vid. loc.

^z De febr. Lib. II. cap. ix. p. m. 143, 145.

^a Aph. 35. p. 46. *Nothing is worse than any the mildest oil when corrupted. The most sweet oil expressed from almonds is so corrupted in a few days, that from being mild, it becomes most caustic, and when swallowed, in a manner burns the fauces.* Ib. Aph. 89. p. 130.

else for several weeks except walnuts, and drinking of coffee four times a day to remove that load which they left on her stomach. I have frequently seen oils, prescribed to patients neither in a putrid nor inflammatory distemper, with a view of soothing and relaxing the irritated nerves, produce quite opposite effects; for they occasioned a sense of heat, acrimony, and pain in the bowels, destroyed the appetite, and rendered the body costive, both from the peculiar acrimony arising from their rancidness, and also from their corrupting the bile, and preventing its proper operation on the intestines. Let oils therefore be rejected wherever there is a putrefaction of the bile, heat, and relaxation; and in other cases let them be prescribed with caution. The art of making them into emulsions guards against their bad effects and admirably preserves their virtues; *for when oily seeds are triturated with water they afford a very soft milky liquid, in which this same oil is contained, but so much changed (by the farinaceous part no doubt) that it will not turn rancid, but grows acid very*

3

soon

soon^b. And it is true that emulsions will entirely cure inflammatory distempers; but in bilious cases I found it better, a few instances excepted, to refrain from them; for though I was not afraid of their turning rancid; yet when there was no hope to obtund so great a quantity of putrid matter, it was much better to give stronger acids, which would correct and at the same time attenuate it. The first intention the emulsions would have answered with difficulty, and the second not at all. I also dreaded their relaxing quality; for notwithstanding the fibres were irritated by a stimulus, yet there was always a relaxation, which never fails to accompany putrefaction, highly noxious, and which the emulsions would have increased. For it is a scandalous and pernicious error both here and in some other cases to attempt the cure of an irritation from a stimulus by relaxing medicines, in the same manner, as a tension from rigidity^c.

F 4

THERE

^b Ibid. Aphorism 88. p. 127.

^c Junker has observed that it is dangerous to use the same method in putrid, and in inflammatory diseases.
Consp.

THERE is another kind of remedies in these disorders very much commended, which I could not pass over in silence without giving my reasons for not using them more frequently; I mean milk-whey, and butter-milk, *which by its acid flavour, affords so agreeable and salutary a remedy in all putrid diseases*^d. The first is an excellent diluent, and vegetable soap, which I sometimes gave with tamarinds and a small dose of emetic tartar, with a design to purge; for common I very seldom prescribed it; 1. because sick people are very apt to nauseate it; 2. it relaxed too much, and I know several patients, who complained after it of weight in the stomach and anxiety; 3. the remedies mentioned before were much more efficacious, as being far more

Consp. Med. theor. pract. tab. 62. If however a person is *obstinately* addicted to the use of emulsions, he will find a very good formula in Boerhaave's little book upon the Materia Medica. § 88. No. 5.

^d Van Swieten Aph. 88. p. 126. See also concerning the excellent virtues of this remedy, the testimonies of these illustrious men, J. Gorter, Medicin. Hippocr. Aphor. 257. Tralles de Cholera morbo, p. 297. Pringle on camp diseases, part. 3. chap. 3. Klokhsch hist. febris culenb. passim. De Haen de deglutit. impedit. p. 47.

acescent;

acescent; 4. I have more than once observed, that although its first change be into an acid, yet it often becomes putrid soon after, and I met with some patients, in whom after a few hours it produced fetid belchings; but this as well as the emulsions had its use, if there were any inflammatory symptoms. Thus last spring I restored to health a young man of a bilious constitution (who in the beginning of winter had taken astringents and great quantities of rhubarb for removing a dysentery) at that time extremely ill of a bilious fever, and a rheumatick humour settled upon his diaphragm, by the continued and copious use of milk-whey impregnated with tamarinds, and barley-water with juices of sorrel, and the greater creeping house-leek*, sweetened with syrrop of acid cherries, giving at the same time clysters; and applying blisters to the soles of the feet.

I

* There are several species of house-leek. The *sedum majus* & *minus*, are possessed of a cooling antiseptic virtue. The acrid house-leek which is antiscorbutick, is hardly to be used for fear of a fatal error, for which
consult

I was prevented from making a general use of butter milk, whose virtues I found much greater in bilious distempers, both by the common method of preparing it in this country, where it is not freed from its oil, which is very prejudicial; and also by the distance of the places from whence it was to be brought: but by God's blessing, we did not want substitutes for these, as appears from what has been already said.

The third Species.

IN the third species the cause was the same as in the second, but more violent; the method of cure was in like manner the same, but more violent; the evacuations were carried on in a similar way, except where there was that kind of *crudity above evacuation*, for then it was requisite to con-

consult the botanical authors, Ill. Ludwig, *Definit. plantar.* N. 613. Linnæus *Gener. plant. de dodecandris polygyniis.* Also Dale's useful *Pharmacologia*, Lib. II. § 16. where he thus commends the greater house-leek, *its principal use inwardly is in bilious fevers; it asswages thirst, and allays heat.*

coct the humours, and after concoction to give a vomit; afterwards the body was kept open by barley water, with leaves or salt of sorrel, and a very small quantity of red rose leaves and tamarinds. The first vomit was never omitted without great mischief, the neglect being always followed by that fetid purging, which I mentioned before, and which agrees exactly with the observations of Sydenham ^f.

WITH regard to drink, in the worst kind of fevers at Cremona, Walcarengi gave juice of pomegranates, diluted in a large quantity of water, an excellent medicine, and commended before by the antients, particularly Alexander ^g, and approved by all physicians; for besides its possessing an antiseptick virtue in an emi-

^f Sect. I. cap. iv. p. m. 31.

^g De Art Medic. Lib. vii. cap. xv. But perhaps it may be objected that the juice of pomegranates is astringent; is it then fit to give astringents in such a disorder? No person who is well acquainted with the theory of his art, can be ignorant of the proper answer, and Alexander has given it already. The juice of pomegranates makes people in health costive, but has not the same effect upon the sick. Id. Lib. viii. cap. viii.

nent degree, being at the same time strengthening and incrassating, it was preferable to other vegetable acids in our case, the most of which relax too much, for it admirably corrects the excessive acrimony of the putrid fluid; and at the same time communicates new strength to the fibres, which enables them to resist the distension created by the putrid flatulencies, to which is owing as I said before that tympanitic inflation that was so bad a presage, for it shews at once both the highest putrefaction of the morbid ferment, and the greatest debility of the solids of the abdomen. It is to be lamented that for want of pomegranates, we were deprived of that excellent medicine; instead of them I substituted with very good success, the dulcified acid mineral spirits of sea salt, nitre, vitriol, and especially sulphur; *for where there is a putrefaction together with an excessive dissolution of the humours, or any apprehension of it in a short time, then the acid spirits obtained by the force of fire from marine salt, nitre, and vitriol, are highly useful; for they most powerfully resist all putrefaction, and at the same time do not dissolve, but rather coagulate our humours.*

humours. This intention is excellently answered by the spirit of sulphur per campan. which yields the purest fossil acid, containing nothing metallic in it^b, And indeed if they are good in any case, certainly here, where the putrefaction, dissolution, and relaxation are so great; I prescribed them either in pure spring water, or in a decoction of the root and leaves of sorrel, red rose leaves, and sometimes with fyrrup of bramble-berries; barley water, with an addition of red rose leaves, was a very convenient vehicle: they drank two ounces every two hours, and we could give no other carminatives in so great an inflation, nor was it possible to find any betterⁱ.

THERE was an alarming symptom in this species unknown to the two former, that is a continued delirium, not only as affording a very bad presage, but being pernicious in its consequences, for the pro-

^b Van Swieten, Aph. 88. p. 127. Confer. Boerhav. Chem. t. 2. proc. 151. p. m. 270. Sennert de febr. Lib. II. cap. vii. where he has very good observations upon the use of mineral acids.

ⁱ Van Swieten, Aph. 650. t. 2. p. 241.

digious tossing which it generally occasioned, totally prevented sleep, increased the heat, anxiety, and restlessness, and often rendered the patients refractory with regard to their medicines. It may be attributed to many causes, 1. the violence of the fever; 2. the tumid inflation, which obstructed respiration, and the want of space for the expansion of the lungs (whence the greatest shortness of breath^k) by which the pulmonary artery was imperfectly evacuated, and the right auricle being turgid, could not receive the blood of the ascending cava, and thus prevented the emptying of the vertebral and jugular veins; 3. to an acrid bilious humour translated to the seat of thought; lastly to sympathy, for observation taught the ancients that the brain suffered by consent from an irritation of the abdominal and phrenic nerves; the cause of this was discovered by the industry of the moderns, and what Senac particularly has wrote upon the subject de-

* For the disorders of respiration from infarctions in the abdomen, consult the elegant dissertation de *Respiratione difficili*, (§ 163, 166, 167.) lately published by the celebrated F. de Sauvages.

serves an attentive reading ¹. By removing the cause of the distemper, we cured the delirium at the same time, and Hippocrates has said that in a bilious delirium proper attention must be paid to the lower belly, and we must give vinegar honey and water ^m. Our whole method consisted in moderating the fever, evacuating and correcting the bile, both in the primæ viæ, and in the blood, and in repelling the inflation; it remained therefore to remove the symptoms which were brought on by sympathy, and as by the constitution of the human frame, a disease from consent of nerves is mitigated by a contrary irritation, theory directed us to an irritation of the inferior parts. Among the known stimulants, none are so much used nor operate so quickly as Cantharides; thus

¹ *Essays de Physique* capitulo les mouvemens sympathiques; several others worth reading have wrote upon sympathy. F. Bayle, C. Walther, H. Rega, E. Buchner, D. Langhans; the illustrious Haller with that sagacity and accuracy, by which all his works are distinguished, has divided the various sympathies into classes, Lin. Physiol. § 555. His principles have been adopted, and doctrine explained by Langhans.

^m De Affection. Foes, p. 518.

led away by custom, I at first ordered blistering plaisters, but they did not answer my wishes, and I remembered afterwards, that they succeeded no better with Walcarengi, *at least I could never trust blisters so much as others indiscriminately do* *. In like manner Borelli says, *that blisters gave no relief, for all the patients were carried to their graves with their arms, feet, and other parts ulcerated* °. I recollected an observation of a great practitioner C. Richa, who in a useful but not sufficiently known work upon a putrid fever at Turin, says, *that the application of blisters was found to be unsuccessful*. And a little after he adds, *when the humours have a tendency to colliquation, when they are acrid and tumultuous, when the*

* Medicin. Rational § 351.

° Epistol. ad Malpighi, p. 28. Glafs observes on this place (Comment. p. 116.) *how useless were blisters applied to the skin, to evacuate corrupted humours stagnating about the stomach*; but this great man does not sufficiently attend to all the effects of stimulating medicines; the principal of which is a contrary irritation; besides a plentiful suppuration discharges many bilious spicula mixed with the blood; neither Borelli nor any one else ever believed, that a cacochymy in the abdomen was evacuated by them, as Glafs would seem to insinuate.

blood is rather to be quieted than stimulated, there is nothing more hurtful, nothing more pernicious^p. Van Swieten, so frequently quoted, observes, *that when the humours are colliquated, acrid, and tending to putrefaction, and there is violent motion, it does not appear so safe to use them*^q. And the famous Guidetti supported both by reason and experience affirms, *that blisters are not good in any kind of bilious fevers even tho' obstinate, especially if the bile be acrimonious and fervid, and it affect the solids and the blood*^r. Therefore presently changing my method, and laying aside cantharides, I had recourse to cataplasms made of leavened paste, the strongest vinegar, and a large quantity of mustard seed, which I ordered to be applied to the legs, but more frequently the soles of the feet^s. Nor did they irritate with less

^p Constit. Epidem. Taurin. ann. 1720. § 32. Confer. Bagliv. de Us. & Abus. Vesic. p. m. 647, &c.

^q Aphor. 75. p. 108.

^r Bianchi histor. hepat. p. 3. p. 307. Vid. loc.

^s I remember very well to have read once in Galen, but I cannot find the place, that patients whose stomach is distended with flatulencies, receive benefit by applying a sponge dipt in the most pungent vinegar to the arms and feet, till it produced phlyctænæ.

force than blisters, and they were not productive of the same mischiefs as cantharides, whose more subtile alkaline part being absorbed and mixed with the blood, promotes its putrefaction, and thus aggravates putrid distempers; while on the contrary the acid particles of the sinapism, being constantly inhaled by the bibulous veins, obtund the force of the putrid matter, which is continually corrupting the humours. The event confirmed the theory, for I often saw with pleasure (I wish it had been always the case) the soles of the feet become extremely red in twelve hours, and before the end of thirty, very large vesicles were raised, which copiously discharged a yellow liquor. After the first day and night, if we were to hope for a favourable issue, the restlessness, and subsultus of the tendons sensibly remitted; the delirium was not then entirely gone, but the patients were more quiet, and in three days recovered their senses; the opening medicines had a greater effect, and they now began to get some sleep. The irritation still did good, even when it had happened either by want of care, or fullness,

lenness, that the sinapisms came off, before they produced blisters; and during the time, that the morbid matter was moved and agitated about, there was a prodigious conflux of the sharpest serum to the spotted places, which would otherwise have fallen upon the more noble parts; hence appears the use of this remedy, and it is consonant to the aphorism of Hippocrates, *if any part is painful before a disease, there the disease fixes itself*^t.

TILL such time as the thick epidermis, which every body has in the soles of their feet, separated, I did not forbear the use of the sinapism, which always evacuated a great quantity of serum, and thin purulent matter. When after six or seven days it had entirely come off by piecemeal, the mildest balsams were applied till it was perfectly healed, nor would the skin, covered by a new epidermis so thin, have bore a pungent application.

^t Lib. iv. Aphor. 33.

THERE is another remedy which is used with the same view as sinapisms, but is very different in its effect, and which is often solicited for by those about a patient, and has been prescribed by some weak physicians, that is, living animals, or parts of animals applied to the soles of the feet, with an intention of drawing out the malignity; and for a proof that they do so, they appeal to the great putrefaction with which they are quickly tainted; not reflecting that the same corruption would have followed in any other place equally warm and moist. What hope is to be entertained from such an application? None at all, for it does not give any irritation, and therefore makes no revulsion; it contains nothing antiseptic, which being absorbed can correct the putrid colliquation of the humours; it does not cause any evacuation; there is no way then in which it does good; but it is hurtful, both as it foment the noxious heat, and as turning quickly putrescent, it becomes the source of putrid effluvia, which being sucked in by the absorbent vessels, increase the violence of the distemper.

IF about the 15th or 17th day, by the use of remedies external and internal, there was great plenty of spontaneous stools, that were concocted and bilious; if the delirium had entirely ceased, and there remained only a weakness of the brain; if the urine, losing its oily appearance, was first equally turbid, and afterwards deposited a sediment^u; if the tongue grew moist, if the gum in the eyes, and the fordes about the teeth were lessened; and what was always a very favourable presage, if the skin grew soft, without that clammy and cold sweat, which is the forerunner of death; then I reckoned the patients to be in a very safe way; and in a short time, without changing their medicines, only lessening the dose, they grew well. On the contrary if, notwithstanding the use of the best means, all the symptoms, described

^u The urine was not sufficient for a crisis; but the concoction of the morbid matter and its salutary excretion was proved by the stools; and at the same time by the urine was evacuated that part of the morbid ferment, which had been transmitted to the vessels; for as the antients rightly observed crises of the vessels are made by the kidneys, and health never followed stools, so long as the urine continued crude.

in the history of the disease, continued and were protracted beyond the seventeenth day, there remained little, if any hope. I remember however that about the end of September, I was called to a woman of thirty, of a slender habit, who had been ill twelve days, in whom the disease varied somewhat from this form: my worthy colleague mentioned before, had attended her; she had all the worst symptoms, except purple spots, and so judicious was the method which he had pursued, that I could find nothing to alter; notwithstanding she reaped no benefit from the most powerful remedies. Her stools were copious, sanious, very fetid, and came away without her being sensible of it; her delirium was constant, the inflation very great, and her pulse exceeding bad. We gave her agreeable acid drink, and every two days an electuary of cassia and rhubarb, used by the famous Kloeckhof *. The reason has slipped my memory, why in the beginning a vomit was omitted, and afterwards the sinapisms. She continued in such a condition every

* *Opuscula Medic.* p. 104.

day, as gave us reason to expect she would die the next, till the 26th day, when at last, together with all the favourable symptoms taken notice of before, she had very great discharges by stool, not cadaverous as formerly, but truly bilious, which in a short time restored her to health. On the 20th of March 1756, I saw another woman forty years old, the mother, if I am not mistaken, of seven children, who had then been ill nine days, and I was surprized to see her countenance quite altered, and almost cadaverous^v; by somebody's advice she had taken a purge of senna and salts, and afterwards warm cardiacs had been given plentifully to remove her weakness and the languor of the stomach. I found her pulse weak, irregular, and her strength entirely wasted; she was delirious but quiet, had no stools for two days, and an almost constant tremor. I gave her a gentle vomit much diluted; she discharged by it greenish-black stuff, but as her belly continued bound, which I don't remember to have happened to any body else,

^v Vid. Foes. p. 231. Lib. vii.

and which no doubt proceeded from the dryness of the intestines occasioned by the use of the hot medicines, I was obliged to order several clysters; she recovered a little strength, and her pulse rose, but the symptoms increased with the fever; her drink was made very aciescent: I ordered sinapisms to be applied, but as they acted slowly and there was need of a speedy revulsion, I caused others to be put to her legs sprinkled with cantharides; for some hours every thing seemed to grow worse; nay altho' there was a copious discharge of serum from the legs, and several blisters were already raised in the soles of the feet, which being opened, discharged the like humour plentifully; yet (which I attributed to the small quantity drank by the patient, who was extremely fullen) for two days the distemper did not in the least remit: on the eighteenth, I gave her tamarinds and manna a second time, she had stools sufficient, but no remission; on the twentieth, there appeared reason to apprehend the greatest danger from the inflation, delirium, weak pulse, stupor, restlessness, shortness of breath, and difficulty of swallowing; but when I found her skin softer, that there were

were no purple spots, that it was near the twenty-first day, and that there was wind rumbling in the abdomen; I ventured to encourage the hopes of her friends, believing that the morbid matter was concocted, put in motion, and hastening to a crisis. I ordered her lemonade with a little wine, if it was possible to get it down; for at such times as I expected a crisis, I omitted the mineral acids, nor did I repent it. About the middle of the night she discharged by stool copiously, and with violence, but insensible of it, and without intermission almost for half an hour. This was followed by the greatest debility, and several intermissions of the pulse; her respiration was not difficult, but scarce perceptible; the stupor very great, and every body looked upon her as dying^z. Early in the morning the surgeon being sent for to dress the blisters, thought it needless; I came a little after, and found the appearance of sleep, rather than death; her respiration was slow, but easy, her pulse very small, but soft and regular; and the inflation of

^z Hippocrates relates a case not unlike this, of Timocrates. *Epidem. Lib. v. Foes. p. 1142.*

the abdomen had subsided. I persuaded them to dress her legs, and to put into her mouth now and then lemonade with half the quantity of wine; and to apply linnen cloths wet in equal parts of warm wine, vinegar, and water, to the abdomen and breast every hour, and to moisten frequently with the same liquor, the parts where the larger vessels were situated. Her pulse was gradually restored, the colour returned to her face, and she enjoyed a calm sleep, and did not awake till next day, six and thirty hours after the crisis, and near three days after the first attack of the stupor; she grew well soon by the discharge of bilious stools: agreeably to what Hippocrates says, who reckons sleep among the crises of a febrile head-ach^a, for the lethargic state was

^a Coac. prænot. § 172. Foes. p. 145. Duret. Lib. II. cap. 1. § 13. p. 88. There is another passage of Hippocrates suitable to our purpose, where he says, prorret. Lib. I. § 63. *It is to be carefully considered, whether a profound deep sleep is in any case to be condemned?* from whence 'tis sufficiently plain, that some observations have given rise to this doubt; the same sentence is found in Coac. No .178, but as all the books don't perfectly agree among themselves, and in some *πράγῃ* is wanting, other interpreters as well as Foësius read

was the first relief our patient had before any other crisis. A second sleep followed the crisis, which was very good, because it shewed her safety. *Sound and quiet sleeps prove the compleatness of a crisis* ^b.

THERE was another instance to confirm the truth of Hippocrates's doctrine, which it is worth while to repeat ; it occurred in that man whose body was dissected ; for during the last days of his distemper, his whole body was covered with purulent pustules, which gave his relations hopes, that were encouraged by the quack ; but on the authority of Hippocrates, I concluded them a certain presage of death ; *for the appearance of pustules all over the body in continued fevers is mortal* ^c.

read simply, *A profound and deep sleep is undoubtedly bad.* But Duretus retains the *spirit of Hippocrates*, (as Baglivi expresses it) and preserves the doubt in his reading. *Whether sleep is in any case bad?* p. 91. But the controversy is ended by experience, which teaches, that sleep coming on is always good, provided it be not occasioned by a metastasis to the brain, for while the tumult is thus composed, the critical evacuations proceed better.

^b Coac. prænot. 151. This aphorism needs no explanation.

^c Coac. § 119. Duret. p. 59.

THIS

THIS then was the history of the disease, and the remedies; some perhaps will wonder at, or rather condemn the constant adherence to one remedy, without so much as frequent changes of the form, during the whole course of the disease. But what then? shall we imitate those, who without attending in the least to the cause of the disease, and regarding only the symptoms, are by that means continually making blunders, and at every visit prescribe several formulæ often opposite either to each other, or to what was given before? A man of a vigorous constitution lives healthy and strong upon bread, water, and milk, to 150, while those, who study nothing else every day but new varieties of food, hardly reach the age of fifty, with frequent sicknesses too. Is then the human body so much changed by a disease, that it can hardly be relieved for a few weeks together by the same remedies? By no means, nature likes neither a change nor composition of medicines; nothing terrifies patients more, whose nausea goes off by custom. I have often cured distempers both acute and chronical by one single formula; by
another

another I have prevented a relapse; I never regretted my constancy, but I have repented of my inconstancy, which a judicious spectator laughs at, and which destroys all the confidence of the patient. The antients gave nothing else but ptisan, oxymel, and a very few other medicines. Why so many changes then? what mischiefs have followed thence? a perpetual uncertainty about the virtues of medicines, an increase of the distemper, the disgrace of the physician, and fears of the patient. When the cause of the disease is known, let the physician immediately employ the best method, and if he has hit the case, let him not vary in the least. Ignorant bystanders may brand a remedy with the title of useless, because it has not removed a severe distemper in a few hours; but a judicious physician knows that a distemper has its periods, and that even the most powerful medicines signify nothing, when they are prematurely administered; he is not ignorant that there are some diseases beyond all the power of physick. Nor is a remedy for this reason to be always rejected, because it cannot prevent a disease from

terminating in death. Let us constantly then remember the precept of Hippocrates, and the advice of his admirable interpreter Gorter. *He who acts upon a rational plan, must not change it, when things don't succeed according to his wishes, if the circumstances are the same as appeared at first*^d. For where the known cause of a distemper does not yield to approved remedies, it must not be attempted by uncertain ones. And as soon as a rational physician endeavours by vague trials to remove the cause of a disease, he differs not the least from an ignorant and rash man, who tries every thing for experiment's sake^e. A great deal more may be said upon this important article, which there is neither time nor room for. It will afterwards appear, that in our malady, except the remedies made use of, which have been mentioned, there were none else, which would not have done harm.

^d Aphor. Lib. ii. § 52.

^e Medicin. Hippocr. Coment. ibid.

The Diet of the Patient.

Diet includes the air and food of the patient. The air, so far as was in my power, I kept cool, and had it frequently renewed in the chamber; for nothing promotes putrefaction more, nor does greater hurt to respiration, than a hot air; and that cause alone is sufficient to aggravate prodigiously the fever, anxiety, and delirium; it is still more prejudicial, if it be heated with the putrid effluvia of the patient and those about him, which is always the case, whenever the air is not changed several times in a day. There are hardly any distempers more pestilent than those, which are generated in places where many people are confined to breathe the same air, without having it renewed. Nor is any one thing more hurtful to the common people than their scrupulous exactness, in keeping the windows of their chambers constantly shut, both from laziness and fear of cold, by which means they perpetually breathe in an atmosphere polluted with the effluvia of human bodies, beasts, food, and excrements.

crements. The vapour of vinegar was often very serviceable.

WITH regard to food there are two rules, from which a physician must not recede, first that the quantity be not too great for the digestive powers; and secondly that the quality of it be opposed to the cause of the disease. In our case the thinnest diet was pointed out both by the stomach, which loathed every thing, and by reason too; for when the stomach was distended by putrid fordes, all the digestive powers were perverted; what benefit then from food? It is presently thrown up again by vomiting, which happened oftner than once; or what was far worse, it was retained, and furnished fresh matter of oppression to the stomach; a new stimulus and fresh fuel to the fever. Nothing nourishes, but what is digested; and the stomach can concoct little or nothing, when it abounds with a bilious humour. But these things are not comprehensible by the relations of the patients, a pestilent set of people; for they cannot be persuaded, that there is a very wide difference betwixt cramming and nourishing,
and

and that, whatever does not nourish the patient, feeds the disease. *Impure bodies, the more you nourish them, the more you hurt them*^f. I do not know a better aphorism in Hippocrates, nor one more frequently transgressed to the destruction of mankind.

THE strength of the stomach was not equal to the concoction of solids; I therefore gave only liquids of very easy digestion, always observing Hippocrates's rule; the more violent the fever, the thinner must be the diet.

IT was our next business to chuse a nutriment, which being opposed to the cause of the distemper, would not putrify: the great master of our profession used his two kinds of ptisan, which were nothing else but decoctions of barley: the best in our disease was undoubtedly oat grits, *for no farinaceous species is found by experience so powerful as oats, to subdue an alcali quickly*^g.

^f Aphorism. Lib. II. § 10.

^g Boerhaav. Praxis Medic. collected by an unknown pupil. T. I. p. 193.

According to the famous Van Swieten, Rye is not inferior to it, but as the method of preparing it is not common here, I made use of oats, not however with that obstinacy as not to admit other preparations from acescent grains, but the flavour of our gruel was agreeable to most people's palates. The best method of preparing it was boiling the grits in water, then straining it, and afterwards adding a little sugar, a most mild, antiseptic, resolving salt, not at all dangerous here; and then giving three ounces every three hours. I had no objection to the addition of part of a young hen or chicken to the gruel, while it was boiling; for they being fed upon oats or other grains afford an acescent juice. I always advised against the use of butter, for the same reasons, that I declared against oily medicines: sometimes too chicken broth, with a little of the expressed juice of sorrel proved excellent nourishment. The celebrated Lud. Mercatus, physician to Philip the second, treating of putrid fevers, recommends things of the same nature. *The common nourishment says he of all, is chicken broth with lettuce or gourd, and we found*

found a mixture of chicken broth and sugar, with lemon juice or vinegar, very agreeable to their taste; the most excellent food is made of panado and sugar, with a small proportion of lemon juice^b. There is nothing I hate more than the strong soups of beef, fowls, and pidgeons, so admired by the relations of a patient, but affording an indigestible mass to a bilious stomach; and whose clandestine use oftner than once occasioned violent exacerbations, nay killed several. They may do good, where the stomach labours under an acid cacoehymy, which they correct by a spontaneous putrefaction, but in putrid distempers they deserve no other name than poison. What shall we say of milk? We answer from Hippocrates; *that it is bad to give milk in the head-ach. It is bad also to those in a fever, and who have wind in the hypochondres and to those who are thirsty, it is prejudicial where there are bilious stools or acute fevers*ⁱ. And the reason is plain, for there is much oily nourishment in milk, which is highly detrimental.

^b Oper. Medic. T. II. p. 386. Compare Fernel. p. 389. Primerose and others.

ⁱ Lib. 5. Aph. 64.

THEY made use of no other drink than the ptisans mentioned, which they always swallowed cold; for warm draughts do as much harm in putrid lax diseases, as they do good in too great rigidity, such as inflammatory disorders; *for any thing hot produces loathing, diminishes the appetite, is offensive to the bowels, and destroys their tone, weakens the nerves, stupifies the mind, and produces faintings and hemorrhages*^k. When the febrile heat was not too great I readily prescribed wine, for I don't know a more excellent or more pleasant cardiac, at the same time that it is antiseptic and diluent¹, and I observe it was approved by Walcarenghi; *it was often proper to allow pure Malmsey wine, by the assistance of which the fibres of the stomach and intestines being rendered more elastic expelled the bilious humour*

^k Lib. 5. Aph. 16. Galen in Comment de Sanitat. tuend. & passim.

¹ Even in inflammatory distempers, when the crisis was approaching, it has often succeeded admirably with me to give the patient one spoonful of soft, agreeable, cardiac wine every three hours; for thereby the strength was raised without any tumult, and the hostile matter most easily expelled.

with greater facility ^m. Hippocrates every where proclaims the praises of wine, and Galen has even shewed us the way in a bilious fever, and given excellent cautions for its use. *Wine must be entirely forborn till the distemper be concocted, but when the concoction has begun, one may give water with a small quantity of wine, and when the disease is declining, it may be used more freely* ⁿ. And in some patients I did not find any medicine equal to an ounce of Syracuse wine, and a like quantity of spring water, with half an ounce of syrup of acid cherries given three or four times a day: a draught which far from increasing, rather moderates the heat, creates an appetite, raises the strength and spirits, assists concoction and the secretions, and which I have successfully used, and would prescribe in all bilious languors. Instead of the syrup of cherries, any other, or citron juice may be added. Another drink also belongs to the dietetick branch, which I often ordered

^m Medicin. Ration. § 345.

ⁿ De Ration. medend. ad Glaucon. Lib. I. c. 9. T. vi. p. 377.

when the patients were recovering, with a view to brace the lax fibres of the stomach, and at the same time entirely destroy the putrid relicks if there were any, this was, spirit of salt with syrup of orange skin and spring water, or the simple water of black cherries.

WHEN the distemper was gone off, and the patient was free of all febrile symptoms and complained only of weakness, a more plentiful diet was required, which must be such as affords a soft nutriment (for the fibres of the stomach and intestines would not bear any thing pungent) easily extracted, not quickly putrescent, nor too relaxing. Well fed veal roasted, was extremely suitable, also calf's tongue and sweet-bread, young lamb, chickens; of the fish kind perch, young pike, trout, salmon, salmon trout, grayling, and river carp, in such places as they are to be found, provided all of them are not dressed in such a manner, as to destroy their natural qualities, by fat, or too large quantities of aromatics. Of the vegetable tribe we used the roots of young skirret, yellow goats beard,

beard, scorzonera, and some of the carrot kind; leaves of fuccory, sorrel, lettuce, and spinage; of the two last I would have it observed, that they are often too relaxing and cooling, or else they are long retained in the stomach undigested, or they occasion a diarrhea which brings them off uncooked°. Asparagus, the leaves and even the tender stalks of artichokes are not to be despised; but the bottoms are too strong for a weak stomach; and care must be taken in all cases, that what is judiciously prescribed by the physician be not rendered hurtful to the patient by the cook^p. The summer fruits, whose expressed juices were so good a medicine in this distemper, afforded a very salutary nourishment in the recovery, provided they were ripe, and

° The antients to correct the laxative quality of vegetables, added to them salt and vinegar.

^p I would quote on this occasion the words of a man to whom we shall find few equals in the former or succeeding age. *We have, says he, in society two orders of men, physicians, and cooks, one of which labours incessantly to preserve our health, and the other to destroy it; with this difference, that the last are much surer of gaining their point than the first.* Diderot. Encyclop. Art. of seasoning.

eaten raw; for by baking, the virtues of most of them are destroyed; they entirely lose their agreeable aromatick flavour, and by that means their cardiac, stimulating, antiseptic quality, and become loading, relaxing, and flatulent, besides producing the mischiefs following from heat or warmth. Authors of great character bear testimony to the cure of many severe distempers performed by the use of raw fruits, and I am assured of it by my own experience; but there are no instances of their success when baked. I know several people who cannot bear them in that way, with whom they agree very well raw.

I avoided the use of meat abounding with blood (for the more blood it contains so much the more it nourishes, and has the greater tendency to putrify) such are all those which they call black; eggs also were improper; the cakes too both prepared by the pastry cook, and at home were very bad; by pleasing the blunted appetite, they have a very pernicious effect upon the health, produce many disorders in the stomach, and obstructions in the bowels,

bowels, from whence proceed incurable languors; nor are common cakes much better, a food so agreeable to many people and established by custom, though they be prejudicial to the stomach, and which every body ought to forbear, who labours under a weakness of that organ or lax fibres. What purpose can the custom serve to drown the juice of flesh in water, spoil bread by toasting it, and subvert the concoctive power of the stomach, at a time when it wants to be raised, by that large dose of hot and emollient pulse. But enough of this, innumerable errors prevail in the diet both of sound and sick people, to explode which, would be a very useful undertaking, of some learned practitioner of the profession.

THE use of wine was always attended with great success; hot drinks were ever hurtful. Exercise in the country air finished the cure.

Relapses.

WHILE the famous Kloeckhof with his usual judgment and learning, practised among

mong the people of Culembourg, he met with several relapses, that were long and tedious, and no way different from the first disease, except that they were less severe^a. We had not the same misfortune; sometimes our distemper grew milder, and quickly after returned with greater violence; but that has no connection with relapses, which were extremely rare when the patient had begun to recover, nor did they last above two days, during which time he was oppressed with a nausea, head-ach, heat, fever, and debility; I never met with them, but after an error in the diet, delay of purging, agitations of mind, or upon a change of weather. In the second case, during the paroxysm, clysters were of use, and as soon as the remission followed, an evacuation by stool was necessary. In the first, if a spontaneous vomiting or purging came on, all was well; if not, a cathartic draught removed at once the cause and the malady, and I several times saw the dis-

^a Which occasioned his writing that elegant book upon relapses, which as well as all the author's works, deserves repeated reading.

order terminated without any evacuation, only by the concoction of the crude matter, which the divine Hippocrates has also taken notice of *. I once saw an infusion of carduus benedict. prove a most speedy relief to a woman, who being but weak then, had eat for breakfast some hot roll buttered, which was followed by nausea, pain of the stomach, anxiety, head-ach, and debility, to so violent a degree, that those about her were afraid of the issue; scarce half an hour after she had vomited copiously, she was very well; a clyster alone was often sufficient. The third and fourth case hardly required any assistance from medicine. A clyster, or draught of baulm water, with the anodyne mineral liquor of Hoffman, frequently removed the tumults occasioned by the passions; oftner they ceased of themselves. The case was harder with old men, for a tumult from whatever cause is more pernicious to them, and I remember an old man, at that time getting perfectly well, who by a violent fit of passion was thrown into a stupor

* Prorreticor. Lib. II. § 16. Foes. p. 85.

truly apoplectic, as appeared by the concomitant palsy of the left side, from which he was restored with difficulty after several weeks: in this case the fore-mentioned draught was of great service; nor was any thing requisite, but clysters, or rather perhaps suppositories, and the mildest lenients, that were at the same time agreeably cardiac. The use of wine restored the strength impaired by a relaxation of the fibres, proceeding from rainy weather and south-erly winds.

Consequences of the Disease.

AFTER the removal of the fever, there frequently remained some morbid relicks, if the method of cure was either begun too late, or badly pursued, or too soon laid aside. The relicks of distempers are always owing, either to the morbid matter not being evacuated, or to debility brought on by the violence of the disease. The morbid matter being retained, either stagnates in the parts originally affected, as when an inflammation is not resolved, the part either suppurates and an abscess follows,

lows, or it grows schirrous; or leaving the place where it was generated, it is translated to another, which is called a metastasis. Thus I once saw in the hospital of St. Eloy at Montpellier, a young robust soldier afflicted with a most violent pain in his left arm; the part was hardly swelled or red, he could not possibly move it, pressure gave him pain, and he had a pretty brisk fever; the physician prescribed bleeding several times, clysters, cooling drink, and emollient cataplasms; but the pain increased. After three days, perhaps about half an hour after the departure of the physician, as I was told by the surgeons of the hospital, it suddenly ceases; they suspect a gangrene, and apply aromack fomentations; in scarce half an hour, he grows cold, shivers, complains of a pain in his head, is presently seized with a delirium, becomes lethargic, and dies in less than four hours. Next day his body was opened, and several more as well as myself, observed the external muscles of the arm separated from the periosteum of the humerus, their adipose membrane dissolved, and the traces of pus formerly collected in
this

this part: the muscular fibres of the extensor longus cubiti had lost all connection with one another. The ventricles of the brain contained matter, which drop'd out from the whole base of the cranium. This is a very useful history, and however foreign to our present purpose, will be acceptable to every body.

SUCH metastases happen of course much more frequently in inflammatory, than in putrid gastric distempers; for the morbid matter, as soon as it is concocted has always prepared for it the long intestinal canal, from which it is spontaneously evacuated; this is the reason, why in above 300 patients and upwards, I met with only one metastasis. A woman of a good constitution about twenty-five years of age, was taken ill in the month of July 1755, the evacuations by purging were neglected in the beginning, and sudorificks administered; thus the morbid matter being neither corrected nor discharged, but absorbed by the lymphatics or lacteals, infected the whole mass of humours, and was the cause of many distresses to the patient, and much trouble

trouble to me; however the distemper grew milder by the continued use of acescent eccoproticks, and the patient was near getting well. Being sensible from the crudity of the urine, the deficiency of bilious stools, the languor and want of sleep, that the crisis was imperfect, I advised the continuance of the medicines, which she utterly refused. Three weeks after, on the day she went first abroad, she was seized with a shivering, which was followed by a very painful erysipelatous tumour in the left leg. Her languor went off, she slept, and *except the swelling*, had no other complaint; she spent several days treating the tumour in a wrong method; at last I was again sent for, and found that by the application of oily things the swelling had been mismanaged, and was actually suppurated: a fluctuation upon the tibia was perceptible to the touch: the tumour is opened by a lancet, and a thin yellow purulent matter is discharged, there remained for several months a tedious ulcer, which was only subdued by internal alteratives. Is not this history conformable to the doctrine of Hippocrates? for thus the venerable old man
has

has observed, *In such whose urine is thin and crude for a long time together, and the other signs salutary, we may expect abscesses below the diaphragm*^{*}; and perhaps an attention to the case of Pythion among others gave rise to this aphorism, *whose urine even at the crisis was somewhat thin, and who on the fortieth day after the crisis had an abscess formed near the anus*[†].

Relicks from obstructions in the bowels.

HIPPOCRATES has observed above two thousand years ago, *that an obstruction of the spleen was formed, when from fevers and the bad management of them, bile, or phlegm, or both stagnated about the spleen*[‡]. In every age the same observation has been repeated, and Primerose says, *that obstinate obstructions of the bowels often happen in fevers, which*

^{*} Prænot. No. 78. Foes. p. 40. Coac. prænot. 582. Foes. 213. de judicat. Foes. p. 54.

[†] He laboured under an acute fever of the bilious kind, and very little bile had been discharged by stool, which was our patient's case also. Epidem. III. § 1. ægr. I. Foes. 1059.

[‡] De Affectionib. cap. xxi. Foes. 521.

are to be cured by laxatives^x. Gianella reckoned obstructions amongst the consequences of fevers^y, and what is more to our purpose upon account of the similarity of the distempers, Walcarengi *had recourse to diluent and resolvent medicines prepared from grass and succory, and mineral waters, that he might prevent obstructions being left in the vessels of the liver, spleen, and mesentery, by the corrupted and tenacious bile*^z. The famous Pringle treats separately of the relics of the bilious fever in the camp, and recites two cases, an ascites and tympanitis, both of them arising from obstructions†. With respect to our patients, I was consulted by many, of the poorer sort especially, in whom I found the liver enlarged and indurated, and the other bowels not quite sound; their strength was impaired, the stomach languishing, the skin yellow, and there was an almost constant sullen

^x De febr. Lib. II. cap. ix. p. 167. Compare Fernel, Heredia, Mercatus, Sennertus, Lancisi, and several others.

^y De Successione Morborum, Lib. II. cap. 4. p. 77.

^z Medicin. Rational. Cap. xxi. Foes. 521.

† Diseases of the army, &c. P. 3. chap. iv. § 6.

anxiety. As far as I could learn from the accounts of the patients, this happened from these causes. 1. If cathartics were given in the first species, but the concoction by means of digestives neglected, as also a vomit, which by the observation of the famous Grainger, certainly prevents obstructions so frequent in an autumnal epidemic^a. Their production was particularly favoured by giving immediately after the first purging, cardiacs or strengtheners, which strongly impacted the crude matter in the bowels, particularly the liver, which was always the principal seat of the distemper. 2. Obstructions were formed in the second and third species, if the more fluid part of the morbid matter was discharged by repeated cathartics, and that with too great precipitation, or without copious dilution, while the grosser part remained fixed in the more remote bowels. Lastly, they followed the fever, if it was too soon stopt by the use of astringents, the Peruvian bark and narcoticks, which happened to three women in the same house, from taking an

^a *Histor. febr. Anomal.* p. 74.

electuary of conserve of roses, bark, and Venice treacle. I shall not now give a detail of the symptoms of obstructions in the viscera, or their method of cure, for they are articles very well explained in authors of the best character; I would only take notice of something more particularly to our present purpose.

BILIOUS tumours however hard, are more easily cured than a schirrus from lymph coagulated and indurated by inflammation; for there are more solvents for bile, than lymph, or adipose concretions; when the bile has acquired even a stony hardness, there is still some hope from resolvents, as daily observations concerning biliary stones testify; on the contrary, a true schirrus, the offspring of inflammation, or a steatom are hardly ever dissolved. This is the reason, why we find many tumours of the liver perfectly cured, and but very few schirri in other parts: and bilious tumours are often more formidable by the corruption of the bile, which strongly corrodes every thing, than by their hardness. Hence in practice, we must be careful to administer, accord-

I 2

ing

ing to the greater or less degree of acrimony in the obstructing humour, remedies more violent or milder. Thus when I met with obstructions from the first cause, I boldly prescribed pills of galbanum, myrrh, extract of the greater celandine, and Venice soap; or upon occasion that of Starkey, giving after them some such draught, as that mentioned in the first section, also friction of the right hypochondre, or even the whole abdomen, and I now and then interposed gentle laxatives, if the symptoms indicated the resolution of the morbid matter in part. But when we are sensible that there is a great degree of acrimony, inspissated atrabile, calculi already indurated, spasms and pains, then we must act in a far milder way: laying aside the gums, antiscorbuticks, alkaliescent soaps and the more pungent salts, we must have recourse to acescent saponaceous vegetables. The best remedies in such a case are the recent expressed juices of succory, dandelion, fumitory, sow thistle, groundsel, and grass; and their leaves also reduced to a pulp with any acid syrup; milk-whey and butter-milk, a strong decoction of quick grass, and

and above all that excellent medicine of Hippocrates, simple hydromel, than which there is nothing better in disorders of this kind; which was buried in oblivion by the vain boasts and avarice of chymists, but restored again to use in our own age^c. Some years ago I attended a patient of an atrabiliary habit, who had a hard tumour

^c I don't know by what unlucky fate the mistake concerning the use of honey crept into physick, to which even men of character in the profession have given their sanction; to wit, that honey is of a bilious nature, and therefore hurtful in biliary disorders; Hippocrates, instructed by accurate observations, was of a different opinion, and every where prescribes honey in bilious distempers, (vide among other places, Foes, p. 547, 558, 560, 575, 636, 642,) and so were Alexander, (Lib. vii. c. xvi.) Fernelius, (p. 289.) ill. Boerhav. (Chem. proc. 42. T. II. p. 102. Aphor. & Comment.) I would recommend particularly, what his faithful pupil De Haen has wrote, *de imped deglut.* p. 49. and which every physician ought to remember. Honey is the most mild juice of plants; a soft acescent soap, destructive of all putrefaction, resolving bilious inflammatory and viscous concretions, and prejudicial to none but weak people, troubled with an acid. Inflammatory diseases, and bilious, both acute and chronic, are cured by honey and water alone; and with an addition of aromatick diureticks it removes difficulty of breathing in old men; mixed with chalybeat aromatic decoctions it will perform, in chronic diseases, relaxation, and obstructions, what you would never obtain from other medicines.

in his liver, violent gripes, yellow colour, want of sleep and debility, and distressed with so obstinate a costiveness, that he would often be twenty days without a stool, and it might justly be applied to him what was said to Furius.

—Culus tibi purior salillo est
Nec toto decies cacas in anno:
Atque id durius est faba et lapillis,
Quod si tu manibus teras fricesque
Non unquam digitum inquinare possis †.

I advised him to take every two hours through the day, three drachms of an electuary consisting of the tender leaves of groundsel and dandelion, pulp of cassia, manna, and syrup of raspberries; and abstaining from all animal food to live entirely upon greens and fruits: and to drink water with a small quantity of honey in it. For the space of three months he regularly observed this course, and was perfectly restored to health, after having lost all hopes of a cure for two years. He hardly

† Catullus, Carmin. 20.

received any benefit the first month, and then his gripes and anxiety being much increased, I prescribed him milk-whey to drink very plentifully, which procured the evacuation of most abominable stuff; presently after the appearances were agreeably changed, and his spirits were raised by the daily success.

I have often observed that stimulating or purging medicines render many obstructions irresoluble, which would have been totally removed by a milder method. There is a species of obstruction from relaxation and stagnating juices not yet concreted, which may be removed by bracing medicines, but there are many more which are increased by giving strengthners too soon. Where there is a dryness of the skin, or the patient is emaciated or old, the unguarded use of the gums, aloes, steel, and spirits never opened one obstructed vessel, but has often brought on an atrophy and palsy.

IN the second case, I frequently made use of the inspissated juice of dandelion

with cream of tartar, vitriolated tartar, and a decoction of grass sweetened with honey. In both cases the proper time for bracing medicines is, when the obstruction is removed; and though the unseasonable use of them is hurtful, yet a total neglect is often dangerous. Every part where there has been an obstruction remains weak and relaxed, after the obstructing matter is dissipated; and unless it be strengthened the distemper easily returns^d. We have daily opportunities of seeing patients, who are freed from obstructions by the use of resolvents, and some months after are seized again, and sometimes cured by the like means, till at last the diseased part is so irreparably tainted as to exclude all means of relief. I have had several dropfical patients who confirmed me in this; they had easily cured the first attacks of the disease by drinking some laxative decoction, but afterwards the relaxation being much increased, it was impossible to restore them; when they might have prevented all re-

^d I only intend here an obstruction from infarctions in the cavity of the vessels.

lapses, if after the removal of the first attack, they had proceeded to the use of strengtheners.

THE diet was lean meat and principally vegetables; the drink white wine and water; they avoided hot aqueous liquors, especially tea, and coffee; and chocolate, which being a fat aromattick food, can by no means be good. Riding on horseback was very serviceable, but was not within the reach of the poorer sort.

WHEN the cure was undertaken in proper time, it generally restored them to perfect health; but when the malady was neglected in the beginning, there was no preventing a fatal issue. A man about the age of fifty, of a bilious constitution and a hard drinker, who had formerly indulged all his passions, and been oppressed with cares of every kind, about fifteen years before had laboured under a quartan ague, and afterwards a fever that he called malignant, but which from the history of the symptoms, I suspected to be bilious, and which had left behind it bilious vomitings

return-

returning frequently, proofs of a beginning infarction in the liver. He was seized with a new distemper in spring 1756; it begun with a shivering, then followed loathing of victuals, nausea, anxiety, an obtuse pain under the right breast, a violent cough, and a slight fever, as I was told, and a yellow skin. The apothecary who attended, had endeavoured to remove the cough by lenients, the want of sleep by narcoticks, and the fever by Peruvian bark. The patient lived in the country, and I visited him on the twentieth day of the disease. The fever had remitted, but the pulse was still quick, small, and frequent; the pain less severe; but there was a jaundice, loathing of victuals, debility, watching and a cough; in the morning he vomited bile; and a careful feeling discovered the liver to be hard. What then was my idea of the distemper? His liver was weakened by the quartan ague formerly, and still more by the bilious fever, and obstructions were formed. All the symptoms of the new distemper indicated a partial inflammation of that bowel, which was not resolved, and threatened greater dangers. I
pre-

prescribed the use of vegetable saponaceous
 acescents, and lean meat, for diet and me-
 dicines; nor did I ever hear of him for a
 year after; and then I found that my ad-
 vice had been neglected; to gratify a deli-
 cate palate, he had fed upon a savoury,
 juicy, aromack diet. The symptoms had
 abated a little, he recovered some degree of
 strength, and followed for a time his usual
 employment, but was always weak; vomit-
 ing bile, and troubled with a cough. In
 the beginning of December, by the advice
 of a foreign physician, who had been im-
 perfectly informed of his case by letter, he
 took pills of Castile soap; he grew worse
 every way: being called to him in the mid-
 dle of January 1757, I found him tor-
 mented with a constant cough, especially
 in the night, with a prodigious expectora-
 tion of viscid bilious stuff; his abdomen
 was distended with water; he slept none,
 had great anxiety, his urine was in very
 small quantity and red, he had great loath-
 ing of victuals, a thirst, the jaundice be-
 ginning to turn black, and his liver swelled
 and hard. All hopes being gone either of
 a cure, or palliating the disease, I could
 hardly

hardly prevail upon myself to prescribe any thing; a very eminent physician being consulted, answers thus, *that for the patient's quiet it was perhaps necessary to prescribe somewhat, which would not hurt and might look like the appearance of assistance; that mild aperient antiseptics, contrary to a bilious putrefaction, seemed to be indicated; nor will the symptomatic cough be removed if the cause resists; and I dare say it will resist.* Contriving a prescription of this nature, and the operation of the paracentesis being performed upon account of the threatening suffocation, the unhappy man drew out, for several weeks after, a miserable life, which in all probability might have been longer, if after the first bilious fever the proper remedies had been administered; and if the inflammation of the liver last year had been discovered and rightly managed; if he had followed the directions given at that time; and lastly, if he had not taken the soap pills, which are to be avoided whenever the humours are putrid.

It will be worth while to relate a more melancholy case from the relicks of bilious
fevers

fevers neglected. At Christmas 1751, my advice was desired by the relations of an unmarried woman above fifty years old. In the course of ten years she had been several times afflicted with a bilious fever, which was always accompanied with a delirium. The last, about three years before, had left her body torpid, and her mind sullen, had brought on a weakness of sight, and a melancholy, which was increased from religious causes, and from a sudden fright changed into a violent delirium, she was tormented with the most dreadful imaginations; she was suspicious of her relations and servants; and when she was awake, often fancied herself to be dead. Her pulse was quick, soft, and the anxiety constant; she had no sleep. When I considered every thing attentively, I soon discovered the cause. The hepatick vessels obstructed by preceeding disorders, the brain weakened by febrile deliriums, and at present irritated both symptomatically by the disease in the hypochondres, and primarily also by the bile mixed in the blood.

blood^e. The knowledge of the cause pointed out the method of cure. The collection of irritating bile was to be evacuated, the obstructions of the abdominal viscera opened; and the whole vascular and nervous system to be strengthened. I was obliged to consent at the earnest request of those about her to venesection, which she impetuously insisted on, and at the same time refused every thing else; little blood was taken away; it neither did the least good, nor much harm. An agreeable diluting acescent drink removed her thirst for two days, an emetic laxative draught discharged a great quantity of bilious matter; and by the plentiful use of pills from acescent soaps, the decoction of grass, and the juice of groundsel, which was then fortunately to be had green, she recovered her health very well, but laid aside her medicines sooner than was fit. Next summer she drank the waters of the village of Vals

^e In twenty deliriums (I would except a natural idiocy) both acute and chronic, eighteen arise from the hypochondria; which is to be well remembered, that we may not hurt patients who are with so much difficulty and so rarely relieved.

in the Vivarois, for several days in small quantities; the year following, 1753, in the spring, she had a second attack, but not so violent as the first, which yielded to acceſcent laxatives. A phyſician being conſulted at a diſtance, adviſed the warm bath for twenty days, and ordered her to drink fix pints of milk-whey every day, with a powder compounded of nitre, cream of tartar, and ſugar. What advantage could be expected from the warm bath in this caſe? In a ſhort time it brings on a violent paroxyſm. The ſurgeon, taking upon him to preſcribe, opened a vein, which changed the circumſtances much for the worſe. The obſtructions, prevalence of the bile, weakneſs, and irritability were increaſed. The patient unknown to every body endeavoured to procure ſleep by narcoticks; the conſequences of which were very miſchievous: the relaxation was heightened, the cauſe of the diſtemper more firmly rooted, and all the ſecretions ſtop'd, the brain entirely debilitated, and the melancholy greatly augmented; ſhe received ſome relief from an electuary of cream of tartar and extract of dandelion, with a decoction of graſs, in
which

which a small quantity of black hellebore was boiled, and a little citron-juice. But her fullness increasing, and all the remedies being thrown aside, the paroxysms became more frequent. During six months every year she was delirious, and for other six was not altogether sensible; the violence of the delirium was once appeased by the cold bath, the frequent use of which I had recommended. At last, from the inclemency of the weather, she caught a peripneumony by sitting on the cold ground, and as far as I could learn was carried off in a few days. She was extremely fond of emulsions, and she never took them without suffering for it next day, for the stomach, being distressed, affected also the brain. Let those learn their mistake, who imagine bleeding and all kind of cooling medicines to be indicated by a delirium; Hippocrates was not of their opinion, who has observed and accurately described a distemper very like this, which he directs to be cured by black hellebore, water, honey, and vinegar^f.

^f He calls it a *gross distemper from bile, when the bile flows to the liver, and stagnates in the head.* De Intern. affect. Cap. LI. Foes. p. 558.

SOME examples I have observed of a different appearance in obstructions of the liver; one case I shall recite. A bulky woman, sixty years of age, in the year 1755, being seized with the epidemic fever and cured by a surgeon, never perfectly recovered her health, but was always weak, and heavy, often short breath'd, and at other times troubled with a loathing of victuals. From the month of June she was more severely distressed by the foregoing symptoms; and a sharp bilious purging came on which often returned; her belly frequently swells as if she had a tympanitis, and almost constantly gives her pain, so that she cannot bear the least tightness of her cloaths; her appetite is entirely gone, and she nauseates meat particularly; she is often thirsty, sleeps very little; the region of the liver is swelled; her urine small in quantity and turbid. What then is the cause of the distemper? a bilious obstruction left in the liver two years ago; and now the morbid matter being colliquated, putrified, and set in motion, occasions all the foregoing symptoms, and will probably produce more dreadful still; for the liver

will totally putrify; and there will follow an hepatick consumption, a tympanitis, ascites, jaundice, and death; unless the violence of the distemper can be restrained by remedies, which I doubt. I thus directed the method of cure; her diet to be of acescent vegetables; the medicines made from the acid soaps, with drink of the same nature, to correct the putrefaction, and not prevent the evacuation of the putrid matter. They seem to do good; I shall avoid drastic purges for they would ruin every thing.—I wrote this above two months ago, but while the first sheets by the printer's delay were still in the press, a fatal issue confirmed the truth of my prognostick, and the patient, remaining in extremity for three days, died this day.

THERE are exceptions of some cases which require a peculiar method of cure; a girl of eighteen, of a scrophulous family, was seized with the epidemick distemper in winter 1756; she was put into the hands of a quack of the lowest kind, and though she had the distemper very favourably, yet it left behind it a deafness, and affected her
mind

mind so as to lessen the quickness of her apprehension, so that she was not so sensible as before; her skin was also frequently disfigured with itching pustules of a dry kind of scab; I believed that in this case I must pay a greater regard to her scrophulous disorder, than to the biliary obstruction of the liver: for such is the nature of the scrophulous poison in adults, that it is increased and not subdued by a fever and produces infarctions in most of the smallest vessels. I emptied the primæ viæ and prescribed Plummer's alterative, with millepedes, sugar, and camphor. This is not above fifteen days ago and she finds herself better already[§].

§ See the author's paper concerning this useful remedy, and a translation of it, which the illustrious Werlhoff a man of great character in the profession has published in a book by itself, together with his own animadversions upon it; it succeeded better with me in the form of a powder; it is successfully mixed with sugar and millepedes. The camphor I added upon account of its virtue in preventing a salivation, which I am well convinced of both by my own experience and that of others. But I would not have it from thence imagined, that I always avoid a salivation in scrophulous disorders, for I have happily cured many scrophulous tumours of the tracheal, jugular, and maxillary glands by that evacuation.

Relicks from Debility.

I mentioned a third kind of relicks, namely, those which proceed from a relaxation of the fibres: *for the bowels contract a debility both from the fever and from the medicines, whence follows a relaxation of the parts, which requires astringents and corroborants*^h; Sennertus among the indications in a putrid fever reckons *restoring the parts debilitated by the febrile heat and morbid matter to their natural temperament and strength*ⁱ. Laxity of the fibres is generated in some parts after too great tension, in others after too frequent vibrations, in all by heat, defect of good nutriment, and the influence of putrid humours. This is not a proper place to enumerate the pernicious consequences, which attend a lax fibre; but the principal symptoms which appeared in our case were, 1. a certain dulness of the senses; and this was only in such as had been extremely ill; neither were they all affected

^h Primerose de febr. Lib. II. c. 9. p. m. 166.

ⁱ De febr. Lib. II. cap. iv. p. 146.

thus;

thus; it was attributed to the brain's being weakened by the febrile heat, and it always ceased in a few weeks^k, and generally the vigour of the mind returned in equal pace with the strength of the body, so strict is their connection; nor would a person have suspected two distinct substances, if he had been taught by phenomena alone, and had listened solely to reason.

—Our minds as well as bodies feel
The power of medicines that change, or
heal †.

2. The strength was recovered more slowly than is common after acute diseases, for this reason, if I am not mistaken, that the stomach, and other parts subservient to digestion, had suffered much more damage in this distemper than in other acute cases, by the morbid matter continually oppressing and irritating them: the repeated evacuations also by stool increased the debility, for they are always hurtful to the

^k Kloekehof. loc. cit. p. 113.

† Lueret. by Creech, Lib. 3.

stomach and intestines. And while the digestion is impaired, the strength cannot be restored. In some, where the nerves were greatly weakened, (and their strength is closely connected with the vigour of the stomach) I could observe a tendency to irregular motion and its symptoms, especially involuntary tears. Their meagerness went off when they recovered strength, sometimes sooner, and I perfectly remember to have seen several, who presently after the return of their appetite grew fat on a sudden; but it was a soft turgid kind of fat grossly elaborated from the nutritious matter, and having its particles imperfectly united together. Nothing did more good in that case than exercise. A boy who was a stranger, was afflicted with almost all the symptoms proceeding from debility; he was eleven years old, of a weak texture, and delicate constitution, and had recovered, as I was informed, with difficulty from the measles a few months before. In the beginning of July he was seized with a debility, lassitude, and loathing in the same manner as all the rest; but what was peculiar to himself, he had at the first

first attack of the disease an eruption hardly to be described in the middle of the anterior part of his neck. In its nature and quality it resembled the herpes, but its figure was very uncommon, for it consisted of two concentric circular fasciæ, which could not have been more accurately delineated by the most expert mathematician. Each fascia was three lines broad; the diameter of the internal circle (including the breadth of the fascia) was almost two inches, the correspondent one of the external was equal to three inches. I prescribed a vomit of Ipecacuan with half an ounce of manna; he grew better, and the eruption becoming gradually dry, disappeared entirely in a few days; and his appetite was restored; not eight days after, he went into the warm bath without consulting me, upon which his disorder suddenly returned with more violence; every thing was done, which the circumstances required, without neglecting his particular constitution; nevertheless he was very ill for six weeks; oppressed with a continued fever and daily exacerbations of it, the greatest aversion to food, and an almost

stant purging. From the second week his brain was weakened, he faltered in his speech, and his memory was impaired; when he got out of bed, he had forgot how to walk, and shed tears without any reason; his appetite was craving, but if he indulged it too much, it was soon followed by a lientery or the fever, nor was his strength restored for three months after, and being weak, he still kept by the fire side ¹. He had grown much before the distemper, he grew while it was upon him, and he continued growing in his own country; and I heard he had scarce recovered his health in half a year, which appears to be owing to his too quick growth; for in such circumstances, nutrition is but imperfectly carried on, the nutritious particles are brought near to each other, but not compacted, the fibres remain lax and unfit for all functions. Crude humours are collected and stagnate every where, for a ca-

¹ I leave it to the judgment of others, whether the imperfect crisis of the measles did not contribute its share in this distemper. Indeed I think that can hardly be doubted when it is considered what happened before the disorder, what were its symptoms, duration, and consequences.

chexy always follows debilitated fibres; and by many instances which I have carefully collected, this sudden growth has always appeared both in fevers and at other times to conceal under it something very pernicious; I have seen many weakened by it and languishing for several years; some are seized with a fatal consumption, and in others the disorder being propagated to their more advanced years, has brought on a bad state of health for all their lives after. Nothing does service in this case but corroborants of all kinds, both by diet and medicine. Exercise, frictions, ligatures, aromatics, steel, bark, and generous wines are found to be of admirable use. Nothing worse than evacuations of all kinds; nothing better than the cold bath, that noble remedy, which, guided by nature, wise antiquity both prescribed and admired; whose salutary effects are pointed out by physics, and confirmed by the daily practice of those nations, whom we call barbarous, that is, not yet corrupted in our way; also by the observation of the English, and my own experience; for whenever there is a relaxation (and where do we not meet with it in these

these days?) and the disorders which accompany it, impaired concoction and digestion, weakness, and irritability of the nerves, the whites, and the numerous consequences of these; provided we are not deterred from its use by incurable obstructions or vomicae, there is no remedy equal to it from the first dawn of life ^m even to old age; and I do not scruple to affirm, that unless its use be restored, that degeneracy of the human frame, which every body sees and deplores, but none remedy, will grow worse and worse; on the contrary, it is increased by the perverse and destructive custom (except in a few cases) of hot bathing, which destroys in a short time the strength of a Hercules, and by bringing on debility paves the way for a thousand complaints, *for he who is weak is next door to one who is sick* ⁿ. But to return from this

^m Unreasonable prejudice carries mothers too far, when they dip their infants in cold water; but I know several instances, where a milder method has answered very well; washing the child all over twice or thrice a day, beginning at the head, with a sponge dip'd in cold water; and thus they are greatly strengthened; and all the diseases prevented which proceed from debility.

ⁿ Hippocrates de Prisca Medicin. Foes, p. 12.

digression.

digression. I durst not venture to give what we call astringents to the weak patients, lest they should immediately bind the body, which must be kept open for a long time. But my hopes were answered by mild bracing medicines, generous wines, frictions of the abdomen, which are never to be neglected in lax cases, and exercise, care being taken at the same time not to overload the stomach with a quantity of food, for nothing is a greater hindrance to digestion, nor consequently increases the debility more; nor was it always easy to manage this point, when the patients, after long abstinence, were possessed with such a desire for food, that it was hardly possible to restrain the younger people especially; but they very quickly suffered for their transgression.

SOME were tormented with pains of the stomach, which were easily cured by any bitters infused in wine, or an elixir to strengthen the bowels.

I observed another symptom exceedingly troublesome, that is, obstinate watchings,
or

or at least unkindly sleep, which I attributed to three causes. 1. To the disorderly motion of the nervous fluid, which always harasses people who are recovering. 2. To disuse; for repeated observations have shewn, that sleep habitually prevented for some time even in perfect health is restored with difficulty, which I myself can testify to my sorrow. 3. To the weakness of the stomach; *for sleep depends entirely upon the stomach*°, which but too plainly appeared from

° Boerhaav. Respons. Consult. circa Dysent. Castrens. Consult. T. 2. p. 22. Conferant. illustr. Haller Lin. Physiolog. § 578, where he defends our opinion: Other Physiologists of equally great name, the illustrious Boerhaave, Senac, and many more reckon a quantity and the viscidty of food among the causes of sleep; is nature then different from herself? or are these great men mistaken? Neither; for natural sleep always follows a certain defect of animal spirits, and a composed motion of all the other humours, or a freedom from anxiety and pain. When any of these conditions are wanting it cannot succeed. Now then a stuffed stomach in a sound robust man, from the stimulus of the aliment draws to itself a greater afflux of spirits, whence they are deficient for the other functions: nor is it such an irritation as creates the sense of pain or anxiety; for in a sound man the spirits are always composed, 'tis no wonder therefore that sleep follows, but in a weak patient the case is quite different, the spirits are deficient, and yet sleep is wanted too; from what reason?

from the bad success of those, who endeavoured to procure sleep by emulsions, nitrous medicines, narcoticks, and bathing the feet in warm water, for they thus every day chased away sleep farther from them, brought on a languor of the stomach and general debility. This watchfulness required no other cure than the strengthening one sufficiently described before, victuals of easy digestion properly dress'd, a light supper, and abstinence from hot aqueous liquors ^p. Malaga wine or that of Alone

son? because there is not a composed regularity in the nervous motions, for from crudity, as I said before, proceed irregular motions; besides all the functions are a kind of labour to a weak person; if then the stomach be loaded, which in a sound man by giving a gentle stimulus, would have procured sleep, in a sick person on the contrary by stimulating too much, and occasioning a universal labour, and increasing the crudity it brings on pain, anxiety, irregular motions, and watchfulness. Lastly, we may observe, that although satiety sometimes produces sleep, it is very seldom that placid, sweet, and refreshing sleep, which follows sobriety. Nor will any person believe that Boerhaave himself was ignorant of our distinction, if he compares the place quoted with that admirable chapter upon sleep in his Institutes.

^p Sleep is prevented by the continued slow mixture of hot aqueous liquors with the blood. Boerhaav. Inst. § 592.

before

before dinner and in the evening succeeded admirably. Sometimes upon the authority of Boerhaave I used the Flor. Martialis⁹. and with success; and what has a near connection with the present case, I remember to have cured some years ago a lady who every night, and often in the day time too, had been tormented for sixteen months with a most violent tooth-ach, and obstinate watchfulness. Venesection, catharticks, bathing, mineral waters, and all kinds of cooling medicines, not only gave no relief, but increased the disorder. I advised her to take twice a day and at bed time, an infusion of aromattick and strengthening stomachicks in wine: the symptoms soon abated, and in less than a month, the pains went entirely off, and her sleep returned. I was informed very lately by the illustrious Haller, whom I never conversed with, without learning something from him, that after those erysipelatous fevers, with which, to the great grief of all good men, he is often afflicted, his sleep, which all cooling medicines prevented, was best restored by

⁹ *Chemia Process.* 169. T. II. p. 286.

that

that generous Spanish wine, which goes under the name of mountain.

WHEN our patients were compleatly recovered, they enjoyed a much more profound sleep, than they had done before the distemper, and the cause of this is plain.

I FOUND in some, especially the younger sort, the symptoms of a slight fever in some measure resembling a hectic, which I imagined to arise from no other cause, than the labour in nutrition; nor was it the fever we were to cure but the debility; unless we were unsuccessful with regard to the latter. And that pernicious practice ought to be here condemned, which from the sensation of heat infers the necessity of refrigerants, as they are called by the writers on the *Materia Medica*, for that sensation very frequently arises from the acrimony and crudity generated by relaxation and the deficiency of good juices; and often a fever is caused by a defect in the circulation. How many people every day have their health destroyed, by having re-

3

course

course in such a case to venesection, refrigerants, clysters, and warm bathing; the debility, crudity, acrimony, and troublesome heat increase; and at last a true hectic fever comes on, which might have been prevented by corroborants, Peruvian bark, steel, wine, and the cold bath. Nothing occurs more commonly in practice, than patients complaining of a heat, *echauffement* as they call it) and physicians are grossly mistaken if they proceed upon the antiphlogistick method; for no art whatever is perhaps able to raise in such patients that inflammation, which they endeavour to remove. A true heat, pardon the expression, is a slight inflammation; but a false one differs from an inflammation; some symptoms at first sight are common to both; if then in both cases, deceived by the outward appearance you employ the same method, which alas too often happens, in the one you will cure your patient, and in the other kill him.

'Tis hardly worth while to mention a symptom, which alarmed the patients
greatly,

greatly, but was not attended with any danger, I mean an universal anasarca, which many of the older people were attacked with; it generally vanished spontaneously as the strength recruited; I neither saw nor heard of any body who in this case remained truly dropfical; the corroborant medicines so often mentioned before were sufficient for the cure. In an oedematous swelling of the legs, which was a little more obstinate, I used the acid tincture of steel, and likewise rolled the parts with linnen bandages moistened with brandy and vinegar, which were drawn a little tighter every day. Such a method would have been hurtful, as will appear afterwards, in a swelling caused by obstructions.

If this disease, improperly or imperfectly cured, entailed troublesome relicks on several, it procured to others more confirmed health. For by pursuing the proper method, all the fordes adhering to the bowels were evacuated, all obstructions cleared, and every acrimony sheathed, and I may affirm of the fever at Lauſanne,

L

what

what has been said concerning intermittent fevers by Dr. Kirkpatrick, to whom mankind are greatly indebted for his excellent book upon inoculation^r, that it prepared the patients for a favourable small pox. I attended three boys in the epidemic fever, and did not leave them till they were perfectly cured; in less than a month they had the small pox so favourably as not to send for me, and I saw them accidentally; two were of ten years, and one of thirteen. Last spring a noble German twenty two years old was seized with the same bilious fever, at the time when he was under a regimen for inoculation; I removed the distemper, and advised him to eat as much fruit as was agreeable to him, the whole summer. Giving nothing else but a laxative potion on the 14th of September, I had him inoculated with a variolous thread on the 16th; a milder sort of the disease cannot be desired than his,

^r *Perhaps a late recovery from such a moderate intermittent as had left no infarctions of the viscera behind it, might constitute a temperament that would not violently co-operate with the variolous infection, &c. The Analysis of Inoculation, p. 219.*

although

although he had above two hundred pustules, and they came to maturity perfectly turgid with a fine matter'. Nor will this appear strange to any one, who has seriously considered this point; for the secret of inoculation consists in giving the variolous infection to a body free from all rigidity, relaxation, debility, obstructions, cacochymy, poyson, and every other disorder; in a word to a sound, but not an athletic body. The art of preparing is to procure such a habit to the patient, and to remove by various remedies the several disorders mentioned; but let those be left to an unhappy fate, who labour under any incurable disease. Any one may easily perceive that our patients, who were cured, possessed all the requisite conditions; a bilious cacochymy¹ is to be feared beyond every thing, and none were more distant from it, than they when properly cured.

¹ I had taken this thread on the 17th of July 1755, that is twenty-six months before; I have not heard that they have been used so old; and it is of importance to know, that such an age does not impair their virtue; for the patient began to grow ill on the 22d of September.

² Kirkpatrick, ib. p. 233.

HAVING thus gone through the history, method of cure, and relicks of the disease, it remains to relate the cure of some symptoms, and examine into certain remedies, used by others, which I entirely omitted with design.

The cure of the symptoms.

A Physician, who undertakes the cure of symptoms, ought to remember Bennet's rule; *take heed that the trunk does not grow, while you are lopping off the branches* ^u, and the caution of that great physician Gaubius, *direct the cure not to every symptom, but only the most urgent: for the effects of the distemper cease, when itself together with its cause is removed; and the symptoms are sometimes so different, nay and opposite as to give contrary indications* ^x. And indeed the symptoms are not many, which require a peculiar treatment, nor is any thing ever to be given, which is calculated to aggra-

^u Theatr. Tabid. Exercit. 27. de usu perdulcium, p. m. 91.

^x De Method. concinnand. formulas Medicas, § 45.

vate the cause of the distemper. An incautious person may be very easily deceived, by the various appearances of a disease, but contraindications occur more rarely, than is perhaps credible, and those symptoms, which at first sight seem contrary to the genius of the distemper, have the same origin with all the rest, and are happily removed by continuing the principal remedy. Depending upon these axioms, I very seldom paid any particular regard to the symptoms. Stools were the only relief for the head-ach, it was mitigated a little by the women applying linnen cloths wet with vinegar. My reason for rejecting narcoticks in the most obstinate watchfulness, will appear afterwards. Faintings were extremely rare, and a physician seldom meddles with them. The purging neither required, nor would have bore any other remedies, but evacuants and acids. Endeavouring to create an appetite by hot aromatics, would have been absolutely wrong. That changeable method of cure is ridiculous and pernicious, which being directed sometimes to the head, sometimes to the breast, now to the

kidneys, and then to the intestines, does no good at all but a great deal of harm. I have therefore only one case worth relating in which I attended to the symptoms.

A German shoemaker, of Zurich, if I remember right, was seized with the epidemick fever in the month of October 1755. I was sent for on the third day, and ordered a vomit on the fourth, and other suitable medicines; but the obstinate man drank very little, being averse to it, nor did he observe such a diet as I had prescribed; on the eighth day I purged him; on the tenth the tumid inflation was so great, that the skin of the abdomen began to grow red from the violent distension: his breath was very short from the impossibility of the descent of the diaphragm, his pulse was small, and what surprized me, he was almost free from a delirium. Being afraid of the mischievous consequences from a compression of all the bowels, and an obstructed respiration; finding no other cause but air rarefied by the bile, whose putrefaction he had not sufficiently

sufficiently corrected by drinking, and being satisfied from feeling the abdomen before, that there was no obstruction prior to the distemper; and having to do with a fullen patient who would hardly conform to rules, and employing my thoughts in searching for a remedy, which would most quickly strengthen the fibres, restrain the flatulency, and stop the putrefaction; I recollected the observations of the antients and some moderns, and my own experience with respect to cold water. Having weighed them all carefully, I ordered a linnen cloth, twice doubled dipt in cold spring water, to be applied over all the abdomen, and to be changed every quarter of an hour^r, and the patient to drink as often

L 4

three

^r In an ardent bilious fever Hippocrates prescribes the same remedy; *When the heat is very great, apply linnen cloths dipt in cold water to the part, where the patient complains of the heat being most violent*, de Intern. affect. cap. xlii. p. 553. Confer. Alexander de Arte Medend. Lib. vii. cap. xv. Cœlius Aurelian. de Acut. passion. Lib. iii. cap. xxi. Ætius Tetrab. 3. Serm. 4. Cap. xxvii. xxviii. Th. Bartholin de Ufu Nivis, Cap. xxiv. Bianchi p. 582. Zacutus Lusit. cured a young man of a very bilious habit by this means, after all other remedies had been tried in vain.

When

three ounces of the same water. In two hours the swelling of his belly subsided, his respiration became easier; in less than three hours a slight colick came on, which produced many large bilious stools, with a continued discharge of wind; the linnen

When the pain says he, was very violent, and the thirst troublesome, I made an application of snow to the painful part, and gave the coldest water with sugar to drink, scarce half an hour passed till the patient cried out he was well. Prax. admir. Lib. II. Observ. 23. p. m. 195. It may be objected perhaps, that he treats here of a colick, and not a flatulent swelling; but I make the conclusion *a fortiori*; where the cause is the same, what does the variety of symptoms signify? it is not our business to explain, why the same bilious cacochymy produces at different times a colick, cholera, iliac passion, dysentery, and apoplexy; but reason dictates, and experience has proved the same remedy to succeed in all cases. Nor are we destitute of observations, which bear a near resemblance to our case, principally that recited by the famous Combalusier in his useful Pneumatopathologia. A woman laboured under a tympanitis, the choicest remedies had no effect, and Dr. Raft a judicious and experienced physician at Lyons, cured her by the external application, and drinking of cold water. I know several, who have cured violent cholick pains, after other medicines were tried in vain, by applying cold water in a fit of despair. A rash attempt undoubtedly; for a violent remedy used cautiously may do great service, but improperly, it is likely to produce the worst diseases. *A cure is prudently conducted by a prudent physician, meddle not if you be ignorant of the method.*

cloths

cloths were taken away, the following night he slept, and next day his belly was soft, the fever much abated, and in a short time he got well, without changing his drink, which I often found exceeding salutary; and it is to be lamented that the use of water has grown obsolete. We give nothing now, unless it be prepared, and often spoiled by the apothecary's art. The wiser antients, when the concoction was perfected gave cold water, an excellent strengthener, and as much of it as the patient was willing to drink, as appears from the works of Hippocrates, Aretæus ^z, Galen ^a, Alexander ^b, Cælius Aurelianus ^c, and others. Galen has even reproached his co-temporaries for neglecting the use of cold water, and calls them Hydrophobi. Among the moderns Fernelius ^d, Hoff-

^z Lib. II. cap. viii.

^a Method. Medend. Lib. ix. cap. vi. well worth reading.

^b Lib. vii. cap. xv. Lib. xii. cap. ii.

^c De Acut. passionib. Lib. III. cap. xxi.

^d Method. Curand. febres Cap. II. Oper. p. 389.

man ^d, Van Swieten ^e, Kloeckhof ^f, Grain-
ger ^g, and many others have prescribed
cold water, and added cautions for its use.

CONVULSIVE motions of the limbs arising from the sympathy, which is caused by the connection between the sixth pair of nerves, and all those of the spine require no particular remedies, and with some the use of antispasmodic animal substances had a very bad effect, though sometimes the spasmodic symptoms appeared to be the principal disorder. A worthy clergyman laboured under a fever, headach, and nausea, but no symptom was so troublesome as violent convulsive shakings frequently returning, which being propagated from the diaphragm, or some contiguous plexus, greatly disordered the whole body; at other times the tremulous mo-

^d De Method. Med. Sect. II. cap. xi. p. m. 469.
De Intestin. dolorib. Obs. iv. & v. t. 4. p. 293.
Edit. fol.

^e Aphor. 640. Tom. II. p. 215. where he treats with his usual judgment upon the use of cold water in fevers,
ib. Aphor. 730. p. 422. Aph. 743. p. 494.

^f Opuscul. p. 18.

^g Febris Anomal. Batav. p. 79.

tion affected only one or two particular members. If I had administered the medicines called nervous, I would soon have brought my patient to his grave; but paying no regard to the symptom, I evacuated the bilious cacochymy by vomiting, catharticks, and acids. The famous Alberti took the same method; *When convulsive motions threaten, particular care must be taken that the bile be properly excreted, that the belly be open, or kept so by clysters*^h. And many ages before Alberti, Galen has given us admirable observations: *In some fevers we have seen, says he, patients suddenly seized with a convulsion, when there was no preceding sign to prognosticate it, and by the coming on of a bilious vomiting, they have been immediately freed from all danger, and some of them thus affected have vomited stuff of a brown colour, and others a liquor resembling juice of leek*ⁱ. And if we look into Van Swieten, who has been so frequently quot-

^h Ubi. supra p. 770.

ⁱ De Affect. Loc. Notit. Lib. V. cap. v. Oper. omn. T. IV. p. 125. In which place, nay in the whole book will be found valuable observations hardly to be met with among the moderns.

ed, and who cannot be too often quoted, we shall find that *while the acrid bile fluctuating in plenty about the præcordia, disturbs the functions of the brain, giving a vomit will quickly remove such a cause of a febrile convulsion*^k. After the evacuation of the bilious colluvies, I prescribed corroborants, being assured that all disorders of the nerves easily become habitual, if their tone is not restored; which caution being neglected after acute distempers often paves the way for a nervous languor; nor indeed, by the way, do I know any other cure for nervous diseases. If there is any stimulating substance, which by continual irritation causes the paroxysms, let it be taken away, and then let strengtheners be made use of. If there be no such thing, then corroborants will fully answer the purpose, without any strong evacuants which are to be avoided.

^k Aph. 713. T. II. p. 359. You will find rules against the abuse of specifics which cannot be too much inculcated; for convulsions immediately terrify the relations, they earnestly call for remedies and administer them; and a weak or wavering physician ruins all.

I WOULD not close the account of the distemper without observing, that the bile, or a putrid cacochymy often occasions more mild and shorter fevers ; every body has met with an ephemera, or simple synochus from this cause ; for if it have a tendency to motion, be small in quantity, and have its principal seat in the intestines, it will raise a fever, violent indeed, but soon ceasing either by spontaneous or procured evacuations ; several being harassed for a night and a day are perfectly restored, if they clear their stomach and bowels by one or two plentiful evacuations, if the cause is more fixed, the languor is protracted for three or four days. But it is tedious to insist on these things.

Of Bleeding in Bilious Fevers.

THOSE people, who are fond of venesection, attribute every disease to the blood, and are incessantly talking of a plethora and stagnation, and omit bleeding in no distemper, will be amazed, that I have not made the least mention of it, though we frequently had heat, dryness of the skin, headache, a violent delirium, and acute fever, which might seem to require such an evacuation. But it is a sad misfortune to those, whose physicians make no enquiry after the cause, and are forward to stop all violent fevers by bleeding; for when the fever is increased after the operation, it kills the patient¹. It is now four years since I published my opinion^m, that venesection is never useful when there is not a plethora; I may add, except in the beginning of an inflammatory distem-

¹ Such an indication is entirely opposite to the doctrine of Hippocrates, *who was so much afraid of bleeding upon account of a fever, that he often thought proper to forbear it for that reason.*

^m Inoculation justified, p. 49.

per, or while it is in a crude state, after violent exercise, being heated in the sun, a fall, and in people only, that strictly are not plethorick, but robust, sanguineous and florid. And far from changing my mind since that time, I every day meet with the mischievous consequences of bleeding, where these conditions are not found. I grant that redundancy of blood may bring on distempers, which indicate bleeding; but the blood repels distempers that do not arise from itself; for the more a person has of this vital fluid, provided he is not plethorick, and that is not frequently the case now-a-days, the better is his situation, and he is the more able to resist the production and attacks of other diseases. The more blood therefore he loses, the more obnoxious he will become to them; for it is absolutely certain, that an evacuation of blood from a sound man who is not plethoric, disposes what is left to a cacochymy, depravity, and the disorders proceeding from putrefaction. But let us consider the point more attentively with regard to the bilious fever, by examining
first

first whether the lancet can do any good, and secondly, whether it can do harm.

THE indications were to evacuate the morbid ferment, situated without the laws of the circulation in the vessels of the stomach, intestines, mesentery, and liver; to correct the putrefaction which was generated, and to strengthen the bowels. What could bleeding contribute to these ends? That will appear by examining its effects. 1st. It diminishes the quantity of blood, and thus removes distempers arising from a redundancy. 2dly, When, from the too great strength of the vessels, and the increased force of the circulation, from any cause, in a robust body, blood inflamed and condensed is accumulated and stagnates in the arteries or veins, venesection by lessening the impetus, relaxing the vessels, and emptying the smallest ones, promotes the resolution and repulsion of the impacted matter, or its resorption if it be diffused. 3dly, It produces relaxation, and from thence debility with its consequent disorders, increases the irritability and paves the way for irregular commotions,

tions, as we learn by innumerable observations. For who has not seen bleeding followed by faintings, tremors flatulent spasms, as they are called, universal, or partial; a delirium, fever and convulsions: when improperly used to several girls for fainting fits, or hysteric suffocations, it has brought on real and dreadful convulsive motions. I very lately saw such a case, where a surgeon acting the physician had prescribed bleeding in the arm, a clyster of astringent red wine, and a draught with yolk of egg, oil, and several other things of the same nature; by this means (and it was not possible it should be otherwise) the convulsions were hardly removed in seven days. Whereas if he had been quiet, that paroxysm like several others would have gone off spontaneously, and left an opportunity for administering preventive medicines. Whoever then will compare the indications in our disease with the effects of this remedy, will soon be satisfied, that it could not in the least promote them; for there was neither plethora, inflammation, nor rigidity; Now let us consider whether it did not augment

M

the

the violence of the distemper? It is very easy to prove it did.

1st. EVERY remedy and especially bleeding, where it does not do good, is prejudicial; for whenever it does not remove the cause of the disease, it wastes the strength, the preservation of which is so important, *for nothing conduces more to a certain cure, than that the strength of the patient be unshaken: it is therefore to be supported by all meansⁿ*. For the more the strength of the patient, which is all the remains of his health, is weakned, the greater will be the violence of the disease.

2dly, BLEEDING relaxes; and from relaxation follow two very bad symptoms, quite contrary to the indications, an increase of the putrefaction^o and weakness of the bowels, whereas it was our aim to strengthen the bowels, and destroy the putrid cacochymy. But to prevent ob-

ⁿ Van Swieten Aphor. 598. l. 2. p. 96.

^o Whatever relaxes in general, disposes to corruption. Pringle's diseases of the army, p. 182. Confer, Baglivi de fibr. motr. lib. post sp. cap. 17. p. 394.

jections from cavillers, we must enter into a short disquisition which the intelligent reader will pardon. By a violent inflammatory fever, say they, the whole mass of blood grows putrid, and this putrefaction is prevented by bleeding, in what way then does it promote putrefaction in another acute fever? The answer is plain, changing the circumstances, the effects also vary; the indications in an acute inflammatory, and an acute putrid fever are widely different. In the first, a purulent or gangrenous putrefaction is generated in the sanguineous vessels from an excess of motion, and violent heat. In a putrid gastric distemper, we have to do with fordes deposited without the vessels of circulation, which are accumulated there by reason of the sluggishness of the solids, and by their spontaneous putrescence, relax all the parts and produce flatulencies; which flatulencies distend the fibres already lax, and too weak to resist them, beyond their due tone, obstruct, compress and irritate the neighbouring parts. Hence it plainly appears, that bleeding, by relaxing the parts, which contain the morbid humour,

according as the disorder is either inflammatory or putrid, prevents or promotes the putrefaction.

3dly, THE disease was aggravated if the putrid matter was hurried into the mass of blood, and this resorption was forwarded by phlebotomy, *for when the larger vessels are emptied, it is very easy for the smaller bibulous vessels to pour into the larger veins the humours which they have imbibed, whence the absorption of the putrid matter will become more easy*^p. Thus then the disease is multiplied, all the humours are infected, the whole machine is dissolved by a putrid colliquation, and all hopes of cure cut off.

4thly, IT not only promotes its absorption, but increases its virulence, for the quantity of good blood being diminished, the effects of the poison become greater. It is an invariable maxim, that the same quantity of infecting poison produces the greater infection, the smaller the quantity of the humour is, upon which it is to act.

^p Van Swieten § 354. T. I. p. 550.

The antients have formerly observed that by bleeding the bile was hurried into the blood, and that the blood served as fetters to the bile. Wherever then there is a putrid humour, bleeding is hurtful, and we may observe this to be confirmed even in inflammatory distempers, where physicians of great character forbid venesection after the fourth day. This rule is not to be understood too strictly, for bleeding has often been serviceable after that time; but it is however true that it does more good on the first days, and often hurts after the fourth¹. Nor are the reasons hitherto alleged for this phenomenon sufficient to account for it; but the principal one appears to me to be the change, after the fourth day, of the distemper: for being inflammatory before, it has now begun to turn putrid. Bleeding in the beginning

¹ Hippocrates broke through this rule, which himself had established, Galen paid little regard to it; perhaps Boerhave trusted it too far. Klokshof in an excellent treatise *de Termin. V. S. in Acut.* has accurately collected both the patrons and enemies of this opinion, and has followed the middle way; but I wonder that great man has not mentioned the reason which I advance.

therefore prevented an approaching putrefaction, and promoted the resolution; after the first days it increases the putrefaction already begun: from hence I observed this rule in inflammatory diseases; as long as the symptoms of a crude inflammation continue, bleeding does good on any day; but when there are any signs of a beginning suppuration, I avoided it altogether, whatever other symptoms there might be; lest I should alter for the worse the distemper, which before was inflammatory, and now become putrid, destroy all hopes of a crisis, and render it malignant and mortal.

My later observations induce me to take notice of another way besides, in which bleeding is more frequently abused in acute diseases; that is they rely upon it solely, neglect other antiphlogistick remedies, and endeavour to attain that by repeated venesection, which they ought to accomplish by diluent, emollient and such like medicines; for the vital strength being debilitated by a wrong treatment, the remission of the inflammatory symptoms
some-

sometimes follows; but while the humours remain crude, and the fibres relaxed, an obstinate cachexy ensues, which might have been easily prevented, but is removed with difficulty. I know several girls, who after having an angina thus cured, have quickly fallen into a chlorosis—But to return from this digression,

WE must observe 5thly, That the production of a bilious fever is not the work of one hour; the fordes are gradually accumulated, the bowels obstructed, the functions of the whole intestinal canal are languidly performed, digestion remains imperfect, and for that reason nutrition is imperfect too; neither is the same quantity of blood prepared, nor is that kind of blood elaborated, which alone is capable of true inflammation. In that moment therefore that a person is seized with a bilious fever, he generally ceases to be plethoric and athletic.

6thly, MANY severe symptoms were brought on by a nervous sympathy, whose violence is increased by a greater tendency

in the humours to motion, and this as I observed before always gathers strength by bleeding, and it is often in this way that it brings on a delirium and convulsions.

BUT it may be asked, would it not abate at least, the frequency of the pulse, or the fever? I answer it neither did nor could do it, for while it aggravates all the causes of the fever, it is difficult to conceive how it can mitigate the fever itself; but let us examine the matter more carefully. The more free the circulation is so much the more slow *cæteris paribus* is the motion of the blood; but by venesection obstructions were generated in the abdomen, as has been sufficiently demonstrated; this then is the first cause of an increased rapidity in the blood.

2dly, THE blood moves with more velocity, (this is put beyond dispute by the doctrine of the illustrious Haller) if the heart becomes more irritable, and the blood more irritating. In our distemper phlebotomy increased the irritability of the heart and the irritating power of the blood,

blood, and this is another cause of a quicker pulse.

AND besides the observations furnished by our Epidemic, to be inserted afterwards, we are not destitute of others to confirm this theory. While I formerly attended the hospital of St. Eloy at Montpellier, a custom prevailed there, which has been strongly recommended by the practical Physicians Gouraigne^r and Fifes^s, of bleeding in the height of the paroxysm in intermittent and remittent fevers; and by this means I did not want opportunities of observing its effects in those distempers, which amongst the people of Guienne almost always approach to the bilious kind. And I solemnly profess that I several times

^r Traſtat. de febr. juxta circul. leg. Part III. Cap. i. p. 433.

^s Traſtat. de febr. Cap. xii. p. m. 281. I am not inclined to enter into the examination of ſuch a method; but this I ſay, that from the repeated bleedings, the too ſtrict diet, and too frequent uſe of cathartics, I obſerved great numbers in the hoſpital, who from a ſimple mild Tertian, fell into an incurable dropſy; the bark is blamed, whoſe only fault is, that being adminiſtered too late, it could not remove that relaxation which the former medicines had occaſioned.

found

found the pulse quicker after bleeding; but I never could observe that its frequency abated, or that the paroxysm was sooner terminated. Only the following accident once happened to a young man, who laboured under a tertian; a little after he had been blooded the bandage was loosened by chance; in a short time he lost such a quantity of blood, that he had several fainting fits; his fever indeed presently ceased, which I would have taken notice of, as consonant to the doctrine of the antients, but he was oppressed with a languor of long continuance. Two physicians had the care of the hospital, and they attended a fortnight each by turns: when one of them, the younger man, treated bilious and putrid malignant fevers by bleeding, purging, and cooling medicines, many patients presently lost the distemper and their lives together. The other, an older man, prescribing a vomit at their first appearance cured almost all, *speedily, safely, and with ease to his patients.*

IN the year 1753, we had with us bilious peripneumonies; all those who were
bled

bled perished: I attended several, omitted bleeding and cured them all; some whom I visited near the end of the distemper, after they had been blooded, breathed with more difficulty and were become delirious; I remember to have found them tormented with a most quick and short respiration; a strong delirium, a small pulse very quick, frequent, and hard. The true method of cure was, after a vomit given in a large quantity of diluent liquor, to inject clysters often, to make them drink plentifully of diureticks and acids, and draw in with their breath the fumes of vinegar frequently.

IF we consult the works of the most celebrated physicians, we shall find our opinion confirmed. Let us go to the books of Hippocrates than which there are none I read with greater pleasure and reverence, nor whose authority I prefer, we shall find in many places descriptions of bilious fevers, and that they were cured by cathartics, oxymel and ptisan, and no where by phlebotomy: on the contrary he affirms, that the blood is attenuated in a bilious
ca-

cacochymy, that it acquired new strength for increasing the distemper by venesection, which was therefore to be avoided. Nay in inflammations if a cacochymy did prevail, he gave a clyster but did not bleed; he forbids bleeding in a spitting of blood if the patient be of a bilious habit^t; which gave rise to some excellent observations of Prosper Martian one of his best commentators; *if the blood, says he, is very thin and approaches to the nature of a bilious humour, it is still more attenuated by bleeding, and there is some danger lest it degenerate totally into a bilious humour*^u. Hippocrates takes notice that lying-in women have bilious fevers from the excessive loss of blood^x, and Martian thus admirably comments on that passage; *bleeding cools, when the heat proceeds from the blood, but has no such effect when it arises from a cacochymy; nay it manifestly appears, that the body when heated by the redundancy of bile grows hotter after bleeding*^y. He has several other pas-

^t De Humorib. § 67. Foes. p. 51.

^u Magn. Hippoc. Cous. Prosp. Martian p. 107.

^x De Morb. Mulierum Lib. II. § 1. Foes. 637.

^y Ibid. p. 193.

sages worth remembering, but particularly an explanation of one of the *coacæ Prænot.*^z: where the father of physic forbids bleeding, if there be a loathing of food, and a swelling of the hypochondre. Aretæus, Celsus, Alexander every where agree with Hippocrates. I must confess that Galen appears to differ, when in several places he prescribes bleeding in putrid fevers; but any body, who reads over his works attentively may thus solve the difficulty. He has wrote in such a manner as to advance several things often more from hypothesis than experience, he always supposes a fulness of the vessels, which is to be removed, before other medicines are administered; but Galen is mistaken, and the building falls of course when the foundation is destroyed, and contradicting himself more than once whenever he lays aside the notion of a plethora, he proceeds upon no other doctrine than ours. In his *Method. Medend.* he affirms, *that bleeding cures neither ob-*

^z Coac. 401. Foes. p. 196. Martian 411. with which ought to be compared Duretus upon the same Aphorism, p. 370.

struction nor putrefaction^a. In the very treatise where he defends phlebotomy against Erasistratus, he sharply reproves those, who bleed indiscriminately in all putrid fevers; there is one where bleeding does good, in ours it was hurtful; in the first Galen would have made use of it, in the second he would have avoided it. Amongst the moderns Fernelius coincides with our sentiments; *Bleeding is bad in a regular tertian, because it evacuates the useful and necessary humour, and leaves behind the impure and noxious, for in this fever the body is commonly wasted and the quantity of blood small; and the acrid bile, the very fuel of the fever abounds and ferments under the cavity of the liver; and as this is not removed by bleeding, consequently the morbid matter is not lessened by it. Nay if blood be discharged either spontaneously or by any operation, you will generally find the bile to rage more fiercely*

^a Lib. II. cap. xiv. Oper. Omn. T. vi. p. 278. In that and the following chapter he prescribes bleeding in putrid fevers; whence then this opposition to himself? In putrid fevers he forbids bleeding, upon account of the putrefaction and obstructions; which he orders elsewhere for a plethora and inflammation.

and the fever gain strength^b. Santa Cruz relates a case, which I would desire those to remember, who are always desirous of bleeding in a fever and heat. He was called on the 28th day of the disease to a man of figure, who had a violent heat, made red urine, had a pain and weight in the head, an inquietude, loathing of food, a dry and black tongue: the patient respiring with difficulty appeared to be dying with an intense pain of the back and breast, and a quick, unequal, and full pulse: the other physician had prescribed phlebotomy, which Santa Cruz forbade from a conjecture, which he formed by feeling the lower belly, that the origin of the fever was from thence; he began immediately to remove it by a purging clyster; and the adust bile together with other gross excrementitious matter being evacuated, the patient immediately found himself much better^c. The illustrious J. Gor-

^b De Meth. Curand. febr. cap. ii. p. m. 388. which words ought to be compared with the quotations from Fises and Gouraigne.

^c De impet. magnor. auxil. Lib. III. cap. xii. on this account also read the valuable work of Barker, Essay, &c. p. 353.

ter physician to the Empress of Russia; who being master of all the learning of the antients and moderns, and having the advantage of a large experience, has delivered to us the whole substance of practice; in a chapter upon the bilious fever, says, *we must refrain from bleeding*^d, and elsewhere, *pblebotomy is prejudicial in distempers arising from a cacochymy*^e. In the epidemic fever described by Borelli, *bleeding was of no use, because this remedy was not omitted in any who died of it, nay it was even repeated to the third time*^f. And I am afraid it much increased the disorder, for every body must immediately see how unequal it was to the evacuation of corrupted humours stagnating about the stomach^g. Bianchi, upon the credit of Guideti's observations, condemns bleeding in bilious pleurifies, if the belly is inflated; for we observed by melancholy experience that this kind of remedy, in a bilious pleurisy, although the symptoms of an acute disease might deceive an incautious

^d System. praxeos n. 230.

^e Compend. tr. 54. § 61.

^f Malpighi ubi supra, p. 28.

^g Glafs. Comment. 7. p. 115.

person,

person, suddenly destroyed many and put an end to their life on the seventh or ninth day^h. Bleeding in a bilious ardent fever is never goodⁱ. In a continued bilious tertian it is pernicious, the concussion of the blood occasioned by venesection increased the tumults of the bile^k. In the beginning of diseases, the fermenting or redundant bile must not be forced through the vessels, by removing the resisting and obstructing particles of the blood by means of phlebotomy. The following aphorism of Avicenna seems properly to belong to this place, "Bleeding often causes a fever, and often occasions putrefaction." And also that of Zacutus Lusitan: "In bilious fevers taking away blood, which by its mild temperament, sheathed the acrimony of the bile may bring on an ebullition of cholerick humours^l." I saw three very robust men, labouring under a simple tertian, who from being blooded on the

^h Hiftor. Hepat. Part III. p. 248.

ⁱ Ibid. p. 625.

^k Ibid.—636. There occurs a little after this, an excellent caution of Guideti, concerning the mischiefs of bleeding and the advantage of vomits, but it is too long to transcribe here.

^l Ibid. 646.

periodical day of the fever, upon the coming on of the paroxysm after, fell into a terrible cholera, and breathed their last with a violent discharge of bile, like a torrent^m. Bleeding in bilious fevers, says Junker, if there is not a very great plethora, and the patient has not been long accustomed to it, produces a metastasis of the humours to the head, with delirium and inflammation of the throatⁿ. Venesection by augmenting the motion of the blood in a bilious fever, increases or confirms its heat and fervour^o. I pass over innumerable authorities, but cannot omit the words of Huxham, who has so great weight with me; and those of P. Walcarengi. When an acrid bilious colluvies abounds, it is most proper to evacuate it by vomit or by stool; for its principal seat is in the primæ viæ, abdominal viscera and mesenteric vessels. I confess indeed, that very frequently the whole mass of blood is thoroughly infected with it; but even in this case, there is no indication for bleeding,

^m Ibid. 701. where there are several other fatal instances of the effect of bleeding in bilious fevers.

ⁿ Consp. Med. th. pr. p. 515.

^o Scardona Aph. de cogn. & cur. morb. Tom. iv. p. 85.

which may lessen the redundancy of blood, but cannot correct its acrimony: and as bleeding thus exhausts the strength but does not remove the acrimony, it does harm. In this way I have more than once seen with great chagrin, most scandalous and irretrievable mistakes made^p. Venesection in these distempers is esteemed altogether improper for a great many reasons, for if, as we have so often inculcated, the origin of such fevers is generally to be attributed to the bile depraved in various ways, what good can be done by bleeding which will evacuate no bile separate from the blood? besides, by means of it the fibres of the solids are much relaxed and weakened, and therefore their elastic force is diminished in proportion; whence they are rendered less fit to promote by their usual and necessary vibrations, the desired excretions of the bilious humour^q.

I HAVE hitherto opposed bleeding in bilious distempers by reason and authority; we must now consider what light was offered by our fever. Among the common

^p Observat. de Aere & morb. Epidem. T. II. p. 177.

^q Medicin. Rational. § 78.

people I remember several, who died in a short time after bleedings quickly repeated; what I was witness to myself, I shall relate. Once very much against my choice, I was forced to allow venesection to a patient in the beginning of the disease, who strenuously solicited me for it; a small quantity was taken away; however there was reason to repent it; two days after, the patient without my knowledge, had a mind to apply leeches to the hemorrhoidal veins, a copious hemorrhage followed; and in a little time all his symptoms were aggravated. Two young men of thirty, who had before enjoyed a firm state of health, from the violence of the head-ach and heat, had both recourse to bleeding upon their own judgment, one of them twice and the other once. Visiting the first upon the sixth day of the distemper, I found him so much debilitated, with so great anxiety, and a heat so violent, a head-ach so excruciating, and the tendency to tumultuous motion so considerable, that I durst not think even of the most gentle evacuants, for although by evacuating the morbid cause, we often removed the debility, yet in this case it was
so

so great, so different from the cause of the distemper, that I was apprehensive, lest an unexpected increase of the tumultuous motions should incapacitate him to bear the first shock of the evacuations. By the mildest acid cardiacs, daily clysters, and blisters, his strength was gradually restored, and then the distemper was in some measure removed by evacuations; but the debilitating cause adhering to the bowels, and leaving an obstruction of the liver, rendered the cure tedious, and made a change of air necessary: for several months the patient continued unfit for all employments, and hardly recovered his former strength for a year after. The second a countryman, soon after his being blooded was seized with a cough, an oppression, stupor, and debility, which were very dangerous to him, and created much trouble to me; for the fever being removed with great difficulty, it remained to cure the debility, which the consequent relaxation and cough had brought upon the lungs; and I was for a long time afraid of a consumption, and that of the worst kind, in which though there be no ulcera-

tion of the lungs, yet there is such a laxity, that all the redundant, stagnant, and corrupted humours, with great shortness of breath, are discharged under the form of a crude glutinous matter. His would have been the second species of the disease, if bleeding had been omitted; but what good did it do in the third? the answer is easy, If the nature of a distemper will not bear a particular remedy, the greater the degree of the disorder is, the more hurtful will that medicine be; nor was it possible the event could be different in this case; for there was the greatest putrefaction, a general infection of the humours, and therefore bleeding was extremely bad. The truth of this is confirmed among other observations, by one, which I shall never remember without sorrow, the death of an excellent person beloved by all good men. Being thirty years of age, he was seized in the month of June 1756, after long troubles with a rheumatick fever, at that time epidemic, which readily fixed upon the diaphragm; some ounces of blood were taken away, with a view of promoting a moisture of the skin, which accordingly succeeded;

succeeded : on the fifth day of the distemper after turbid urine, which perfectly deposited a large sediment, and copious sweats, he was very well; on the sixth he was entirely free of the fever, but the sudden attack and returns of some subsultory motions in the joints indicated, that there was some morbid ferment in the primæ viæ, which might be evacuated next day. Indeed all the symptoms of inflammation were already gone off. But alas, while I was absent in the evening, after being in a passion, he was seized with new symptoms entirely different. His pulse, which in the disorder was regular, high, and strong, was now become frequent, very quick, and very small; hitherto he had been sensible and did not wander in the least; but now a sudden delirium came on, which however disappeared, when he was alarmed; his urine was limpid, his skin dry, his excrements crude, and respiration performed with difficulty. What idea could I form of the distemper? By the common causes of the epidemic, by his cares especially, anxiety and sorrow, a putrid ferment was generated in the vessels

of the liver; for nothing obstructs the secretory vessels of the bile sooner than grief. In this condition he falls into a catarrhal fever, which was much promoted by the weather, and the situation of his domestic affairs at that time: neither was it violent, because in a body, whose humours begin to grow putrescent, a strong inflammation does not ensue; but the consequence is very bad, for by an increase of heat, the morbid ferment most readily turned putrid; excessive grief is fatal, for, 1. *from passion the most destructive poison may be generated in the body**, 2. the secretion of bile both sound and putrid is stop'd, which is followed by white excrements, and perhaps a translocation of the putrid matter into the blood, for who has not observed a jaundice from a similar cause. 3. From the spasmodick contraction of the whole vascular system, all the other secretions and excretions were equally interrupted, whence the thinness of the urine and dryness of the skin. 4. From hence with the concurrence of the former causes, the brain

* Fred. Hoffman,

was quickly affected. We had to deal then with a putrid and spasmodick distemper: the indications with regard to the putrid humour were the same, that have been so often mentioned, but there were contra-indications from a complication of symptoms; for vomiting was forbid both by the spasm of the alimentary canal, which discovered itself by that sense of anxiety of which the patient complained at the pit of his stomach, and also the tendency of the epidemic in its vigour to an inflammation of the diaphragm, for it ought to be a sacred rule with a physician, to do no harm at least, if he can do no good. The distemper might be considered as a bilary ardent fever, *where bleeding is never useful; nor must strong purging be employed in the beginning, on account of the spasmodick disorder of the stomach and intestines*. What was to be done? Being called in the middle of the night I prescribed a clyster, and a draught of barley-water, which was at hand, with some drops of Hoffman's anodyne mineral liquor, which after

• Bianchi & Giudetì, p. 625,

agitations of mind, I have found an excellent remedy by drinking some tepid liquor after it. The symptoms abated, and in the morning I could safely give manna, tamarinds, and a small dose of emetic tartar¹, dissolved in a decoction of grass, of which he was to take three ounces every hour, and after this dose was finished, the same decoction of grass with juice of sorrel and citron. Returning in the evening, for the patient lived in the country, I found he had drank scarce half the purging draught, and but little of the acid ptisan, but he had taken the anodyne mineral liquor frequently, he had gone thrice to stool, and the discharge was bilious, his head which I left clear when I went away in the morning, was now confused; and his pulse very quick: the following night he passed without sleep, and the delirium increased. In the morning I prescribed the same laxative ptisan, and another of bar-

¹ The excellency of emetic tartar in a small dose and large vehicle, and used with an intention to purge is sufficiently apparent both from other authorities, and from what has been mentioned before in this book; for it is a very good stimulus, not in the least irritating and thus preferable to the milder salts.

ley-water, an acid fyrup, and ſpirit of nitre, and ſtrong ſinapiſms to the ſoles of his feet. I took my leave, and every thing was ſet aſide, a conſultation is talked of, which met in the afternoon; inſtead of the fore-mentioned drinks, milk-whey with tamarinds is preſcribed, inſtead of the ſinapiſms, bliſters to the legs; next day every thing grew worſe, no evacuations followed; the day after there was another conſultation at ſix in the morning; he laboured under the greateſt reſtleſſneſs, and a ſtrong phrenitick delirium, his pulse as before frequent, ſmall, and quick, which was very bad, for phrenſies with a ſtrong tenſe and ſlow pulse are curable, hardly with a ſmall and quick one. Upon account of the delirium he is bled, which I remonſtrated againſt in vain, he grows more outrageous^u, and his hypochondres become tenſe. Three hours after by the advice of the other phyſician, he is again bled in the

^u Excellent obſervations which relate the ſame event are found in the uſeful and entertaining diary of the famous Vandermonde, T. iv. p. 468. T. vi. p. 240. 463. It is remarked that in the delirium of theſe bilious fevers, bleeding in the foot was fatal, ib. 472.

foot, still against my judgment; the patient faints, and the delirium abated a little from his weakness, for it returned again with his strength; several doses of an emetic medicine are given, but hardly any evacuation followed, he had a very bad night. Next day the result of the fourth consultation was, giving a strong cathartic; his pulse was hardly perceptible, with a strong delirium: he had no stool; in the afternoon a sharp clyster is injected; and there followed an immense discharge; and by continued faintings an end was put to the life of this worthy man. I leave it to the judgment of physicians, whether the former method was preferable to the latter. Death certainly could not follow with more cruel symptoms, nor more rapidly; all indications with regard to the strength were neglected, nor were any other remedies administered, but such whose futility I have demonstrated. Would the cold bath have done any service in this case? The antients undoubtedly thought so, *for in a continued putrid fever, if the patient was not emaciated, and was young, the temper of the air hot, and the fever very violent,*

violent, they permitted swimming in cold water *.

A STRONG man, by trade a smith, of a bilious constitution, and given to drinking, in the month of January last year, while he was in his cups was seized with a shivering, followed by a vomiting of black matter^y; his friends gave him sudorific medicines but nothing else; on the fifth day a surgeon was sent for to bleed him,

* Sennert. de febr. Lib. II. cap. x. p. 290. Confer. Primerose, Avicenna, Coelius Aurelianus, Celsus, and especially Galen, both in *Method. medend.* lib. ii. cap. xx. T. 6. p. 288. and in many other places. Dr. Baynard has collected several histories from which it appears that the cold bath has been of excellent use in ardent fevers attended with a delirium, *Psycrolusia*, or the genuine use of the hot and cold bath, p. 229. An useful instance is found in a little book, whose title is *The antient physician's legacy to his country*, p. 121. with these ought to be compared Willis de anim. bruton. Part. II. cap. x. oper. T. 2. p. 265. Similar histories may be seen every where; nature points out the way, and reason confirms the method, why should we fear to follow it: former ages did, and succeeding ages will deride our cowardice, and those of our own times suffer for it.

^y A discharge of atrabile either upwards or downwards, in the beginning of any disease is mortal. Hippocr. Lib. iv. Aph. 22.

who refused to do it without my sanction ; coming to the patient about noon, I found he had been delirious for two days already ; his countenance was cadaverous, his breath extremely short, his pulse very small and intermitting, and I don't remember to have met with a worse. He had not gone to stool from the beginning of the distemper. After making a fatal prognostic, I prescribed clysters, grateful acid cardiacs, and linnen cloths dip'd in vinegar, to be applied to the abdomen ; all these are neglected ; at three in the afternoon he is bled by some obscure barber ; for some minutes his phrenzy was most outrageous, and in a little time he suddenly died. During the last hours of his life he had cried out earnestly in his delirium for bleeding ; by this many may learn how little regard is often to be paid to a blind instinct, when it is contrary to reason.

SPONTANEOUS hemorrhages, though they happened seldom, were not more beneficial, but mortal from the colliquation of the blood, and the relaxation of the vessels. A robust man a baker, who was
not

not very ill at first, took nothing else, but a decoction of vulnerary herbs with Venice treacle; when the disorder grew worse he was purged, and afterwards by the advice of an old woman, used a decoction of Carduus Benedict. with hartshorn, of a putrid and hurtful tendency. Being sent for on the ninth day I found him extremely weak, in some measure delirious and catching at the clothes; he had purple spots in his breast and neck; and there had come on already a fetid diarrhea which brought away something bloody; in short, there remained no hope. For the satisfaction of those about him, I prescribed a grateful cardiac and antiseptic drink, which he was to make common use of; before it was prepared, an hemorrhage from the nostrils and by stool put an end to the unhappy man's life. What are we to learn from the two last cases? the true cause of many malignant fevers; that is the neglect of evacuating in time the putrid coluvies by a vomit, increasing it by bleeding or sudorifics, and forcing it into the blood. I did not observe either a flooding or the menses in the time of the distemper. A
noble

noble person subject to copious discharges by the hemorrhoidal vessels, and tormented every year with an amazing hemorrhage from the nose; was seized with our distemper, and lost not one drop of blood either one way or the other. Nature wisely did not endeavour after a crisis so dangerous, when the animal oeconomy was not labouring under the greatest oppression.

Not to leave our work imperfect, it remains to be explained, why illustrious physicians from antiquity down to our own times, have advised bleeding in putrid fevers. I have already touched upon this point; the reason then is this, that there are two kinds of putrid fevers, some simply putrid, in which phlebotomy is always hurtful, and which physicians who were truly skilled in the medical art, never attempted to cure by bleeding: but it must be observed that frequently men destitute of all accurate erudition acquire the character of famous practitioners; and however illustrious they may be reckoned by their ignorant adherents, they are deemed by other physicians and impartial posterity

terity pestilent quacks, whose destructive practice cannot be too cautiously avoided.

THE second is of that kind of putrid diseases, where there is a concomitant inflammation, in which bleeding is an admirable remedy. We are not yet sufficiently acquainted with the theory of inflammation, or the manner in which its stimuli act, to be able to explain, why it is sometimes joined to a putrefaction, and sometimes not; experience has convinced us that it is so, and distinctly shewn the pathognomic symptoms of both cases; and every day's practice affords many instances of it; they are to be found both elsewhere, and in the elegant histories of epidemics published by the illustrious Huxham. Allow me to insist a little upon that which the celebrated Pringle has so accurately described. It is denominated indeed *a bilious fever*, but by an attentive consideration it will soon appear, that the appellation is not comprehensive enough; the ingenious author speaks several times of an inflammation of the stomach; there

was a true inflammatory phrenzy, which he cured by antiphlogisticks. When the inflammation was removed, it remained to combat with the bilious colluvies, which he judiciously dislodged by vomits and purging, which in distempers purely inflammatory are found very hurtful. But the Edinburgh physician had to deal with robust soldiers, young, and bred in the mountains, accustomed to drink spirituous liquors, and in fine, obnoxious to all the causes of inflammation, and in whom it very easily follows the application of a stimulus. Thus the first mischief of the putrid ferment was to produce an inflammation. If in such circumstances it had been attempted to vomit or purge before the inflammation was resolved, it would have been attended with the worst consequences. Such a distemper ought to be esteemed and treated like an inflammation of the bowels; and here the excellent precepts of Hippocrates hold good. *Vehement pains of the liver, and weight of the spleen and other inflammations and complications of diseases cannot be removed, if the cure of them be begun first by a cathartic medicine, but in such cases*

cases bleeding must be premised. Then the next step is to clysters, and after that purging medicines; whoever attempts immediately in the beginning of distempers to resolve inflammations by a purging medicine, will make no derivation from the containing and inflamed part; because no distemper gives way in the least, while it continues crude; but they will waste those parts, which resist the disease, and are sound. Thus when the body is rendered weak, the malady gains the superiority, and when it has overcome the body, admits of no remedy^z. The whole secret of the cure then consists in removing the inflammation by antiphlogisticks, and reducing the disease to the state of simple putrefaction.

^z De Vict. Acutor. Cap. xxxvi. Foes, p. 396. What Hippocrates advised in a particular case, Sydenham has delivered as an universal axiom, nor does it thence follow that these great men differ; but as a person remarkable for his genius, learning, practice, and elegance, observes, a viscus or inflammatory disposition of the humours is much more frequent in England than a cacochymy or corruption and contrary wise in Greece. But he himself has observed and described, and several other British physicians have met with fevers which would not at all bear bleeding, but required purging in the beginning. Barker agreement between &c. Essay p. 344.

But it is to be observed, 1. when there is, as I said before, a cacochymy present; an inflammation, as such, is never of long continuance, nor obstinate, but is presently changed into a putrid colliquation. The truth of this is confirmed by scorbutick scrophulous, and venereal patients, who often labour under a false, but never a true inflammation; and the symptoms, with which they are afflicted, are aggravated by an antiphlogistick medicine. 2. As soon as the crudity of the inflammation is gone, the next step is to cure the putrefaction. 3. While we select remedies to subdue the inflammation, we are not to lose sight altogether of the concomitant putrefaction: 4. Every physician ought carefully to remember, that the diseases of the abdomen, which in the beginning were solely inflammatory, leave behind after the inflammation is cured, a putrid sanies, which will be the fuel of a new distemper, if it is not discharged. For when any one part of the abdomen is inflamed, all the other parts of it being affected by sympathy at least, and sometimes idiopathically, the disease being propagated to them by reason

son of their vicinity, have all their functions disturbed; the secretions are interrupted by the stricture, the humours stagnate, and by the febrile heat quickly putrify, thence is generated the morbid ferment. Some years ago I saw a man in the country, thirty years old upon the eleventh day of the distemper; he laboured under a violent inflammation of the liver, *a disease more frequent than is commonly imagined, though it is often not known when present, neglected, or treated under the title of some other disorder*^a, which had also been the case here, he was several times bled, and beyond measure, if I am not mistaken; clysters were frequently injected, and very properly; oily medicines were used for the cough, but with no good effect; they were intended to promote expectoration; he was weak, and distressed with an anxiety; I discovered the true nature of the disease and was persuaded by the pulse, urine, and feel-

^a Boerhaave Aph. 907, where he speaks of the Paraphrenitis; but this observation is not less applicable to the hepatitis, at least in our country. Men of character have said the disease was more rare elsewhere.

ing of the abdomen, which had been hitherto neglected, that it was concocted. I prescribed milk-whey with tamarinds and sal prunell. to be drank plentifully, and a purging clyster to be injected two hours after taking the first cup of the ptisan. This was followed in a little time by stools which were bilious, almost purulent, and very fetid; through the day and night he went more than thirty times to stool; the anxiety, and swelling of the hypochondre vanished; the yellowness of the skin went off, and in a very little time he got perfectly well by the use of mild cleansing medicines.

IN summer last year, a young German was a patient in our hospital; he came to this city very well, but being hot and thirsty he had drank plentifully of water at a spring. Soon after his whole abdomen, especially the right side was much swelled and pained, and he was oppressed with a fever, anxiety, and shortness of breath; to remove the inflammation, after venesection, I applied cataplasms of bread and milk to the abdomen, ordered him great
 plenty

plenty of the mildest drink, and clysters; on the fifth day, manna dissolved in milk-whey; and I was almost amazed at the immense quantity of putrid and fetid matter, which he discharged, the greatest part of which had been generated within a few days in this young man, who was before in very good health, and had no tendency to a bilious habit; on the eighth day, he went out of the hospital. The antients have already mentioned two kinds of ardent fevers, one inflammatory, and the other bilious; in the latter medicines opposed to the bile were only useful, in the first it was necessary to bleed ^b.

It is now abundantly plain when it may be prejudicial to bleed in bilious fevers, and when salutary. I have neither inclination nor opportunity to treat of venesection in other distempers; but I may add, in short, that it is pernicious to all who labour under a cacochymy, are weak, subject to catarrhs, scorbutick, or troubled with cold viscid humours, or with worms. *Where*

^b Bianchi & Guideti, p. 621—626.

there is little blood as in chlorotick girls, it is the part of an executioner and not a physician to bleed plentifully^c. Lancisi in his description of an epidemic fever has observed that venesection must be cautiously used: *I would not have bleeding attempted, unless in persons pretty plump, and altogether free from worms*^d. A young girl of a weak, lax, and valetudinary habit, died most cruelly here very lately after several bleedings; she laboured under a putrid worm fever, which would have been cured by vomiting, cathartics, and particularly acids^e. In a bastard peripneumony that was epidemical here in spring 1754, all those died, who were bled more than once; for the more blood was taken away, so much the more was that viscid matter increased, which people of sanguineous habits are never troubled with, the pulse became more fre-

^c Ballon. Epidemic. Lib. ii. t. I. p. 108.

^d Histor. febr. Epidem. Balneo.—Regienfis Cap. iv. § 20.

^e The famous Scordona describes an epidemic putrid worm fever, in which acids were of singular use, *after discharging great numbers of worms, the thirst and immoderate evacuations ceasing, they grew perfectly well.* Ubi Supra, Lib. III. cap. vi. t. 3. p. 78.

quent and weak, the lungs were altogether oppressed; and thus after each bleeding respiration became more difficult, the brain was obstructed, and the patient perished with anxiety.

EVEN in inflammatory distempers, after a first, second, or at most, a third bleeding, taking away any more generally renders the disease incurable; all hopes of a resolution are gone; and the equilibrium between the solids and fluids being destroyed, the circulation is entirely perverted; every impetus is directed to the diseased part; the phlogistick stagnation is increased, and compacted in proportion to the quantity of blood taken away, more than was proper; or if it proceeds farther, and it frequently does so, the small remains of red blood circulate in the larger vessels, while there is a compleat stagnation in the smaller; and there follows in an inflammatory distemper a gangrene from debility, and shortly after, death. We are not destitute of means to supply the want of venesection, and unless the case be very alarming, it might always be safely omitted;

ted; but it is very difficult to repair the mischiefs done by improper bleeding to a weak person. These are no trifles, however despised by multitudes, but truths demonstrated by theory, and daily confirmed by lamentable experience. What shall we say then? *The blood is the treasure and support of nature^f. In the blood is the focus of the vital heat^g. The blood is the vivifying nectar, by which the fleeting vigour of all the parts is refreshed and recruited to the preservation and continuance of life and the animal functions^h.* These are the precious words of French authors whose merit transcends our praise, and I wish they were constantly attended to by physicians. How many are daily sent to their graves by those, who contrary to all reason prescribe phlebotomy in acute diseases till such time as the symptoms abate; whose remission they obstruct with all their power? How many by those who are continually bleeding by way of prevention, as they love to call it, but the

^f Ballon. ubi supra.

^g Duret. in Coacas, p. 285.

^h Ibid. 192.

more suitable term is by way of destruction? By the repeated use of venesection the more robust bodies are gradually worn out, which the antients knew long agoⁱ, much more the weak in whom there is not a more frequent cause of disorders, than the defect of good blood. The debility is gradually increased, the digestion destroyed, perspiration interrupted, a cacochymy generated, nervous disorders brought on, a multitude of catarrhs follow, and obstructions are formed, and from thence many other diseases sprout as from their trunk. Some object idly, that in a few days after venesection, the quantity of blood evacuated is replaced, and they quote the experiment of the famous Dodart, who caused sixteen ounces of blood to be taken from himself, and after five days, without increasing in the least the quantity of his food, he weighed more than he did before the evacuation. From this instance appears the mischief and not the utility of

ⁱ Hippocr. Lib. I. Aph. 3. which place appears to me highly worthy of attention, for it contains excellent principles on this subject, which no physician has sufficiently treated of hitherto.

bleeding; for that increase of weight argues a diminution of the secretions, and excretions, weakness of the viscera and vessels, and an approaching cacochymy. All this is most accurately explained by the ingenious Maty, and many would have done well, who are now in another world, if every physician had taken his words for the rule of his practice^k; *I would here observe that the frequent repetition of venesection is a bad custom. There are some who chuse to have a vein opened several times in a year, and by this means hope that they free themselves from many disorders; which is certainly a pernicious opinion; for venesection always diminishes the blood, spirits, and strength. Recourse therefore must only be had to it in necessity as to a remedy always disagreeable, however sometimes necessary. But those who are accustomed to frequent bleedings lose the best of their blood; they acquire more indeed in equal quantity, but not of the same quality; for this new blood is crude, watery, fluggish, unfit for circulation, causes dropsies, and almost inevitably produces*

^k M. Maty Differt. de Consuetudin. Efficacia in Corpus hum. Leidæ 1740.

the distempers from debility, defect of good blood and spirits, and the redundancy of water. The mischief is greatly increased by the use of catharticks, hot aqueous liquors, and a sedentary life, which three causes joined to phlebotomy, are sufficient to destroy gradually the whole human race. Nor is there a more active cause of that degeneracy and depopulation which I have elsewhere lamented †.

Of the use of absorbents in bilious fevers.

I entirely refrained from absorbents recommended by the followers of Stahl and several others. The celebrated Tralles has treated so clearly of their inutility that I have nothing new to add. The substance

† Passing over a multitude of others, I shall only quote one book of the celebrated Peter Barbere, which fell into my hands lately, *Observations Anatomiques tirées des ouvertures d'un grand nombre de cadavres*, 4to. 1753. A very useful work undoubtedly, if physicians will learn from it to avoid the pernicious practice of the author; which I do not mention from a desire of finding fault with a good man, whose labours in natural history deserve praise; but with a view of cautioning young men against the authority of a practitioner, who has some fame in the world.

of what he says is, that they have no other virtue but to absorb an acid; and when there is no acid, they oppress the stomach with a useless load. In our distemper, the bile was peccant by its excessive alcalescence, and acids were necessary to subdue it; it would have been absurd to oppose to the same distemper both useful remedies, and others which destroy their virtues, and thus prevent all their effects. There are also absorbents, which naturally promote putrefaction. Such then would have been prejudicial upon a double account, both by rendering the use of acids ineffectual, and by forwarding the putrescence. They could have done nothing by way of sheathing; for they only sheath an acid acrimony, which we endeavoured to raise. Nor indeed are they believed safe by several physicians in every acid redundancy. What must be their effect then, where there is none. The use of absorbents, which a more genuine pathology ought to have rejected, had prevailed from a false prejudice concerning acid bile, which every body now laughs at. Stahl seems to prefer the rock crystal to the rest, than which there
is

is not a substance more useleſs to the human body. Baglivi has already very judiciously condemned them in putrid fevers¹. And Hoffman, who formerly having drawn his knowledge only from the precepts of others, and being perhaps too ready to follow great names, had commended them in bilious diſtempers; when he was afterwards inſtructed by an uncorrupted che-miſtry, and the accurate obſervation of diſeaſes, allowed their uſe only in diſtempers proceeding from an acid; and wherever there is a putrefaction he truſts ſolely to acids^m. Neither did I often give nitre; in the firſt ſpecies the other neutral ſalts appeared preferable; in the ſecond and third, every remedy which was not aceſcent ſignified nothing; and I have obſerved more than once, that nitre by no means ſhewed that compoſing and cooling virtue in putrid diſeaſes, which it poſſeſſes in ſome other diſorders. Being mixed with the blood, it increaſes its fluidity, and changes

¹ De febr. motr. lib. poſt Speciem. Cap. xiii. p. 388.

^m Obſervat. Chemic. Lib. II. cap. xix. Oper. T. iv. 502.

its purple nay black colour into a ruddy one, and its virtue appears to be that of resolving a phlogistick viscosity; hence in inflammatory distempers it is an excellent cooler, provided it be not given in too great quantity; but in a bilious distemper, where the humours are too thin, a like effect was not to be expected. The base of nitre consists of an alkaline putrid matter often loosely joined to a weak acid, so that if there follows a separation of its constituent principles in the human body, which easily happens, more mischief is done by its alkaline basis, than good by its acid. Nor are attentive practitioners ignorant that nitre does more good in the beginning of inflammatory distempers, than in the following periods, when a putrefaction is begun.

Of Sudorificks and Diureticks.

I have observed before that spontaneous sweats were hurtful, and treating the disease by that method proved the cruel means of death. For what is the action of sudorificks? By them the evacuation of the
morbid

morbid matter by stool is prevented; they increase its force and acrimony, promote its absorption, the blood is more quickly infected, and thus from a general putrescence of the humours proceed the symptoms of malignity; for the particles of the bile are always too gross for excretion by the cutaneous pores or the kidneys. *By diaphoreticks the bilious matter is copiously hurried into the blood, and though it be attenuated, it will not go off by sweat.* It is certainly both a mad and dangerous attempt to drive the cacochymy of the abdomen into the vessels, so as to make it pass by the smallest strainers of the body. And experience proved, that if it was carried spontaneously to the surface of the skin, it could be evacuated only by catharticks. It is long ago known, that the morbifick cause of an erysipelas has its seat commonly about the gall bladder, and that there is not a better method to exterminate it than by emeticks or catharticks ^P. I observed three cases of

^P The celebrated D'Arluc has given a description of an erysipelas in the head much to our present purpose, which with a violent fever raged epidemically, and where the cure was vomiting, &c. *Recueil periodique, &c.* T. viii. p. 55.

our epidemick, which confirm this doctrine; by some unaccountable and sudden change, the bilious matter, making its way to the skin, brought on a most vehement fever, and a kind of erysipelatous eruption in the breast, neck, arms and thighs, with an excessive itching; and it affected also the fauces with a slight angina, which afterwards ulcerated; nothing was of any service but repeated purging and giving acids^q. In the epidemic disease of Cremona, Walcarengi seldom observed sweats, and they were always prejudicial before the fifteenth day. Huxham has taken notice *that premature sweats in putrid fevers most certainly suppressed the urine, and the intestinal discharge, and were soon followed by a delirium*^r. *For this is not the way in which such fevers are cured*^s. No jaundice is ever

^q This is exactly consonant to Hippocrates's Aphorism, Lib. II. § 15. in which he informs us that some diseases of the skin and fauces are topical, and others arise from an effusion of morbid bile, *when the fauces are diseased or tubercles rise on the skin, it is necessary to examine the excretions, for if they are bilious, the whole body is affected at the same time.* And his learned interpreter J. Hollerius justly observed, that the cure was purging.

^r T. II. p. 72.

^s Baglivi Prax. Med. p. 57.

removed by sweating; *so great is the common opposition of the bilary obstructed matter to a diaphoresis*^t. And Alberti says very judiciously, *if diaphoreticks are prescribed too soon, then the fever becomes much more violent and immoderate, and the tumult of the bilious matter within the body is greatly increased; the necessary evacuation of bile is prevented, the heart-burn grows worse, and the burning heat at the pit of the stomach is rendered more vehement, a delirium comes on, cold sweats, faintings, parching heat with anxiety, great inquietudes, swellings of the neck, and inflammatory disorders, nay convulsions*^u; his preceptor Stahl is not more favourable to sweats, who observes, *that diaphoreticks were neither useful nor tolerable*^x. Is there then no room for diureticks nor sweating? I would not have the rule understood so strictly. In every fever, though the cause of it is not lodged within the vessels, yet the mass of blood is always corrupted both by the absorption of morbid particles, and also by the retention of excrementitious particles,

^t Bianchi ubi supra, p. 303. where useful observations are found.

^u Ubi supra, § 22. p. 770.

^x De febr. biliosa. § 49. p. 23.

whose excretion never fails to be interrupted by a fever, and these fordes, which ought to be evacuated, being retained generate a cacochymy in their peculiar vessels; nor is a depuration to be attempted during the violence of the fever, for it is then impossible. But when the fever is almost cured or nearly overcome by the proper remedies, we may then promote all the secretions, that the opened strainers may copiously pour out their corrupted humours, and the fordes of the blood, being now concocted, may be discharged. I said that turbid urine was excreted in the decline of the distemper, and that when it remained crude at that time, an erysipelas of the leg was the consequence. Some diseases are terminated by sweats alone; the inflammatory, which do not come to suppuration, by urine and sweats; bilious and erysipelatous by stools: but even in these there is always something, which must be discharged by urine and sweat. It is a law, from which nature never recedes, not to expell foreign humours by larger orifices, when she can discharge them by smaller. Thus in some malignant or venemous diseases, in which the morbid humour is highly attenuated,

tenuated, sweats are sufficient for a crisis; they will also do in the inflammatory, if the disease be but slight, and is terminated by resolution as it is called, but when it advances so far as to produce a suppuration, then the purulent part, which cannot go off by the cutaneous pores, is discharged by the kidneys. If there is also a grosser matter in the abdominal viscera, stools are the only means for its expulsion. It is of great importance for a physician, to be able from a knowledge of the cause of a disease to foresee the way by which the concocted matter will be evacuated. In the epidemick distemper of Lausanne, I have very frequently seen profuse sweats come on about the fourteenth or seventeenth day, and particularly great abundance of urine discharged for upwards of a month. Does not the facility with which these evacuations succeed, indicate the use of sudorificks or diureticks according to the aphorism, *where nature points she must be followed?* By no means: for nature having by this time recovered her vigour, and not being oppressed with a putrid ferment, is sufficient to act by herself; and prepares and performs what is salutary. If we were

to add a spur, by increasing the secretions beyond measure, we would probably bring on debility, obstructions, and a slow fever. Sometimes on the contrary, if by continuing too long, they waste the strength, and appear to be cherished only by the weakness of the organs, it is proper to moderate them with grateful acid aromattick strengtheners; the Elixir Vitriol. of Edinburgh does very well here; and I have successfully used the tincture of steel with a weak decoction of bark ^y.

Of Cardiacs.

As many causes as there are of debility, so many classes we have of cardiacs; for there is no other cardiac, than what removes the cause of debility. In a relaxation, the strength is recruited by bitters mixed with stimulants, vinous and spirituous liquors; in a defect of good juices, by nourishment; both these increased the debility, which oppressed our patients in the beginning of the distemper: *for the strength seemed to be prostrated, but that arose from the*

^y I am supported in this by the authority of Ludwig. Instit. Med. § 1446.

pungency of the bile, and was restored by purging^z. And it evidently appeared that vomiting or purging had the effect of cardiacs; therefore Alberti wisely observed, *that in fainting fits, which sometimes occur in this fever, analeptick and nervous medicines are improper as long as the peccant bilious matter remains within; wherefore a better remedy cannot be prepared even for those faintings, than such a one which facilitates the proper evacuation of the bilious matter*^a. But hot spirituous, nay and vinous liquors exasperate every thing by increasing the stimulus and heat, preventing evacuations, and more firmly compacting the morbid matter as sudorificks do, which is incomprehensible to the vulgar. To have recourse immediately, as soon as the strength is impaired, to stimulants and strong aromack soups, is a practice which cannot be too much condemned. I solemnly protest, that nothing does greater mischief to patients; and this detestable custom has brought many to their graves, who would have escaped such a fate, if the common people could have been persuaded (and how many are there who judge

^z Ballon. Epidem. Lib. I. Op. T. I. p. 6.

^a Ubi supra, p. 769.

like the vulgar?) 1. that a man may live for a long time upon pure water alone, or thin ptisan, and that no body dies in acute distempers from want of food: 2. That spirituous and nourishing things, always in the beginning of fevers, and often at other times waste the strength, increase the fever, and destroy the virtues of the medicines: 3. That nothing can be a cardiac, but what is opposed to the cause of the disease: 4. That the choice of remedies is a matter often difficult even to the skilfull, and is far above the province of a woman: 5. That a mistake here is of very bad consequence, *for what is a cordial to one, may be poison to another*^b. Boerhaave has taken notice, *that the use of cardiacs in fevers is very seldom understood*: and his pupil says, *that no remedy, however it may have been extolled, can be absolutely and simply called a cardiac in fevers, seeing its use or abuse depends entirely upon the various causes of debility*^c. I therefore never prescribed any cardiac belonging to that class generally so called, till after evacuations: Sometimes if the pati-

^b Walcarengi Medicin. Ration. p. 219.

^c Aph. 672. Comment. ib. T. II. p. 285.

ent appeared too weak after these, not for fear of his dying, but with a view of assisting the secretions, I ordered the mildest, and most frequently wine, which I have so often commended, or the anodyne mineral liquor of Hoffman, *an acid, oily, mild medicine, which most powerfully resists all putrefaction, and by its grateful fragrance wonderfully recruits the languid stomach*^a. And this was dropp'd into the patient's drink in such proportion, that he took a small quantity of it in each draught; and I found the effect more agreeable, than if I had given larger doses at longer intervals, which, by stimulating too strongly, increase the fever, at least for a short time, and raise a transient and slight delirium, like that from drunkenness. I have before spoken at length of the cardiacs used during the recovery.

Of Narcoticks.

THE physicians, who attend only to symptoms, when they observed the highest agitation, head-ach, and obstinate watchings, would have administered narcotics with a liberal hand; but a rational phy-

^a Van Swieten, § 644. T. II. p. 224.

fician was absolutely deter'd from using them both by theory and authority, which were corroborated by experience. *Although it be a common practice in this fever to mitigate the symptoms by anodynes, yet according to the vulgar use they are pernicious, and I would earnestly dissuade from them in obstinate watchings and pains of the head*^e. And Junker has observed, *that the unseasonable use of opiates is followed with many and various dangers*^f. Nor did they succeed better with us, than at Hall; for when the common people harassed with want of sleep had recourse to diacodium, whose virtues they were taught by the pernicious custom of giving it to children, they did not sleep the more for it; but the weakness, crudity, and other symptoms were aggravated. I visited a girl of twenty, who besides several other symptoms, laboured under so violent a cough, (which was very uncommon) that she swallowed with great difficulty, and whatever went down was presently returned by vomiting. Clysters and epithems being of no service, I could not

^e Alberti, p. 769, 770.

^f Ubi supra, p. 517.

think of any other medicine but a narcotick, to remove the sympathy, the cause of the cough^g. Soon after she had thrown up the first dose of diacodium, I ordered a second, which indeed appeased the cough, but there remained so great debility without any sleep, that she underwent a continued succession of fainting fits; cloths dipt in wine, applied to the abdomen, drinking lemonade with wine, and the anodyne mineral liquor revived her strength, and the cough being abated, I was able to give a vomit, which entirely subdued it. I attended a noble person, to whom near the end of the disease, or rather when it was overcome, I allowed through complaisance five drops of Sydenham's laudanum in a stomachick draught; he suffered from it a severe colick, a disorder to which he was an utter stranger. The experiment

^g That this cough arose from sympathy no body will doubt, who is acquainted with the laws, causes, and effects of sympathy; now there is a double connection between the breast and stomach, that is by the continuity of membranes and the community of nerves. Why it was stronger in this girl than in all the rest is to be accounted for by the particular texture of the membranes; by the acrimony and situation of the morbid matter, which could irritate sometimes one and sometimes another plexus.

being

being made a second time produced the same bad consequence, which proved that the laudanum had been the cause of the pain; for he had several times taken with a good effect the same draught without the opiate, and he had not committed the least error in his diet. Narcoticks succeeded no better with that patient who had been seized with a cough after bleeding. In general I avoided them entirely, nor do I remember to have given them above five times, and always in a very small dose. Every body will easily see why so much mischief is occasioned in putrid distempers by this remedy, which elsewhere is of all others the most noble: for it increases the relaxation, and by that means the flatulency and putrefaction^h, and prevents the intestinal discharges, unless they be sup-

^h Opium increased the putrefaction in our fever several ways, 1. by relaxing the fibres; 2. by preventing the evacuation of the putrid matter; 3. by obstructing the action of the nerves: for the illustrious Haller has proved by experiments, that a putrefaction is quickly generated both in the stomach and elsewhere, from an interruption given to the action of the nerves. Sec. Mem. sur l'irritab. exp. 182, 183, 185. but opium is not endowed with any septic quality, properly so called; witness Pringle's experiments on septic and antiseptic substances, exp. 10. where its emollient virtue is also evinced.

pressed from rigidity or a spasm. What mischiefs flow from these is already apparent; and this observation gives fresh weight to the saying of Boerhaave; *that there is no one thing, which is always good, but on the contrary, what in one condition has been salutary, upon a change of circumstances is often found to be pernicious.*

The Preventive Method.

THE prophylactick part of physick is not sufficiently cultivated; there are many distempers, which by an attentive observer may be foreseen several days before they first attack, and I am persuaded that a distemper which is foreseen may be either entirely prevented, or at least rendered milder. I attended a young man, who was seized with a bilious fever at a time when I was endeavouring by medicines to subdue a bilious cacochymy, under which he laboured, and whose tumults I was afraid of; the distemper was severe, and I can hardly believe, that he would have survived it, if the morbid matter had not been rendered milder, and its quantity diminished; it would be foreign to my purpose to
give

give more instances and cautions. Whoever is solicitous about the prevention of our distemper, cannot be better informed than in the words of Borelli. *That I may preserve myself for my friends, besides my accustomed way of life, I take a draught of water every morning fasting, and in the evening mix a little spirit of sulphur or some other acid with the water. For the rest I live chearful, and boldly employ my whole time in philosophizing. Three days ago I found a very bitter taste in my mouth, which I endeavoured to correct by taking two ounces of cassia, which opened my body, and appears to have had the desired success*¹. Four indications occur here, 1. that the usual quantity of food through the day be somewhat diminished; for nothing conduces more to the gradual removal of infarctions in the bowels, and to empty them. 2. That the food be of such a nature, as will not promote the disorder; such is mentioned in the article upon diet: the drink spring-water alone, or mixed with wine or made gratefully acid. 3. That an air too hot be avoided, that the body be put in motion, and the

¹ Malpighi Oper. posthum. p. 28, 29.

belly kept open ; which purpose, besides being promoted by the diet before-mentioned, is excellently answered by a drachm of cream of tartar in a cup of water taken fasting. 4. To be particularly mindful of the Italian philosopher's advice to live chearfully: I have recited the sad effects of grief, and have observed, that almost all died who were taken ill after such a state of mind, even though the distemper at first sight did not appear very violent; either from the cacochymy following, or from the loss of strength which was destroyed by the anxiety ; for when that fails no malady can be cured.

Practical Canons.

THE idea of a putrid fever is this. Every putrid humour is acrimonious and thus stimulates the sensible and irritable parts ; from hence there is a two-fold cause for morbid motions, among which a fever is to be placed. The putrefaction and fever relax the solids, which produces a new cause of disorders. A putrid humour is unfit for nutrition, and this is a third source of diseases.

DEATH

DEATH follows in these distempers; if the fever arrives at that pitch which is incompatible with life; if the putrefaction infects the mass of blood to such a degree, that an entire stop is put to nutrition, while there is a continued wasting; if any vital function is totally interrupted; if a gangrene seizes the internal parts, for from a gangrene follows debility and death.

PUTRID diseases are either universal, if the putrefaction has equally infected almost all the humours, and these are called malignant; or they are gastric, if the morbid matter is principally situated in the abdomen. There are several humours in the abdomen susceptible of putrefaction, nor is the corruption of them all equally pernicious, and for that reason all putrid gastric fevers are not alike violent; no corruption is worse than that of the bile, and the fevers generated by it are the worst of them all.

THE same method of cure is required in all of them, and therefore he who knows how to cure the bilious fever will
treat

treat all the others very properly. Our first species, as I said before, can hardly be reckoned among the bilious, and affords some appearance of variation in the method of cure.

GASTRIC fevers are either simply putrid, or at the same time inflammatory. In the latter, bleeding is sometimes necessary, and the evacuations are to be postponed till the inflammation is removed.

IN putrid fevers where there is no inflammation, as well the universal as the gastric, phlebotomy is hurtful, as also all oily substances, even emulsions, all relaxing, septic acrimonious and narcotick medicines, nourishing and succulent foods. Diureticks are hurtful in putrid gastric disorders, for they increase the fever; interrupt the intestinal discharges, bring on a delirium, general putrefaction, malignity, purple spots, and after these death.

THE diet ought to be more or less thin, according to the degree of the disease; and to consist always of acescent vegetables, farinaceous substances, greens or fruits.

Let butter be avoided. Broth may be made of chickens or young hens.

LET the first step be vomiting and purging; the cure will be compleated by antiseptick drink, and purging repeated either now and then, or every day, but let that be promoted gently by means of acefcent laxatives, or the emetick tartar diluted plentifully in an aqueous vehicle. At times it is expedient to purge a little more strongly, if the symptoms shew that the humours are more viscid and concocted with difficulty; but where their tendency to motion is greater, daily but mild purging is better, lest by delay the malignity of the humour be increased, or it be absorbed.

CLYSTERS are not of so much use here as in inflammatory cases, where the more frequently they are given, so much the better; but in bilious diseases the repeated use of emollients would do harm, and I hardly ever ordered any but such as were purging, particularly with catholicon. Often in the beginning they did little good; towards the end they succeeded admirably by bringing away copious stools.

WHOEVER would attempt to cure the symptoms any otherwise than by the general method, would ruin all.

THE infirmities produced by debility are cured by select medicines given regularly in their proper time, exercise, and country air. The remedies whose nature we have explained are seldom requisite.

REMAINING obstructions of the viscera, particularly the liver, are removed by vegetable soaps; such are succory, grafs, honey, milk-whey, and butter milk. They grow worse if recourse is had too soon to opening, acrimonious, and stimulating medicines. Alkaline soaps improperly given, bring on a putrid cacochymy: yet I have sometimes used with success the alkaline mineral waters in a small dose for four or five days. When the obstructions are removed, a relapse is prevented by strengtheners.

ALL the differences between countries produce no difference in the method of cure, whatever noise ignorant men make on that article. From these varieties it happens that some distempers are more frequent

quent in one, and some in another; but wherever the same disease occurs, the same method of cure is necessary in all countries. The method by which Hippocrates cured bilious fevers is the same with that used in England and Germany, Walcarenghi employed the same at Cremona, Mercatus, Heredia, and Zacutus, in Spain and Portugal; the same has succeeded with me, and will succeed always, in all ages and climates.

F I N I S.

E R R A T A.

- Page 14. Notes, line 2. *cause. We learn*, dele the point.
 — 18. l. 13. for *where*, read *in which*.
 — 28. l. 12. for *humours*, read *tumours*.
 — 55. l. 3. for *commotions*, read *motions*.
 — 79. Not. lin. penult. for *doctrins*, read *his doctrine*.

